THIRTY-SEVENTH ANNUAL REPORT

OF THE

Sanitary Commissioner for the Government of Bombay,

1900

WITH

APPENDICES.

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SECTION I.—METEOROLOGY.—No remarks.

SECTION II.—EUROPEAN ARMY.—No remarks.

SECTION III.—NATIVE ARMY.—No remarks.

SECTION IV.—JAILS.—No remarks.

SECTION V.

GENERAL POPULATION AND VITAL STATISTICS.

1. The Census was taken on the 1st March 1901, and it will be of interest to compare the figures obtained with those made out by deducting the deaths from the births since 1891.

In the first five years of the decade, the registered births exceeded the deaths by 549,797, and the increase occurred in all districts except Bombay City, Broach, Kaira and Ahmedabad, in which the deaths exceeded the births by 48,544, 1,651, 8,255 and 22,854, respectively, the years 1892, 1893 and 1894 being the years in which the high death-rate occurred.

In the last half of the decade, however, owing to the bad years of 1897, 1899 and 1900, the registered deaths exceeded the registered births in all the collectorates except Dhárwár, Kánara, Shikárpur and the Upper Sind Frontier, but on the whole ten years the total diminution of population is 241,547 and the decrease is shown in the City of Bombay, every Gujarát District, Násik and Thána in the Western Registration District and Poona in the Central Registration District.

Comparing the figures thus obtained by registration with the census figures, very striking discrepancies are observed.

A table is attached showing this. The census figures for 1901 are those furnished by the Provincial Superintendent of Census Operations and include Europeans and Eurasians, and so for purposes of comparison Census figures for 1891 of Europeans and Eurasians have been added to the native population as shown for 1891. It is stated that there is not likely to be much difference between the census figures of 1891 and 1901 as regards Europeans and Eurasians, but on this point I am doubtful and should think there had been a fairly substantial increase. If this is found to be the case the difference now shown between the census and registration figures as regards the native population will be much lessened. The census figures show an increase over the registration figures in the Collectorates of Thána, Kolába, Dhárwár, Ahmedabad, all collectorates in Sind and in Bombay City. In the City of Bombay the registration, especially of births, is defective, and in Sind it is known that the registration of births, especially of female infants, is below what it should be. In Ahmedabad, Thána and Dharwár the increase may be accounted for by immigration. It is the decrease shown in the census figures over those shown by registration which is so difficult to account for, as in some cases the differences are so large. Accepting the census figures as correct, there are two causes which may partly account for the deficiency. One is that the emigration in search of work to foreign territory, such as is known to have taken place from Ahmednagar, Sholápur and other places after the rains of 1900, has been much larger than

was calculated, and the other is that all the deaths which took place have not been registered. The Deputy Sanitary Commissioner, Gujarát Registration District, considers that this has been the case in Gujarát and it is possible in Khándesh also, but why the difference should be so great in places like Sátára, Belgaum and Bijápur is difficult of explanation, except it is the continued effect of emigration and deficient registration, but on the whole the difference is not so large, and considering the agency by which registration is carried out, it is satisfactory that the difference is not larger :—

Collectorate.	Census of 1891.	Increase for the years 1891—1900 of		Total according to Registration.	Census figures for 1901.	Difference between Census and Registration figures.	
		Births over Deaths.	Deaths over Births.			Increase.	Decrease.
Khándesh	1,460,851	32,007	...	1,492,858	1,442,018	...	50,840
Násik	843,582	...	4,164	839,418	819,575	...	19,843
Thána	819,580	...	18,141	801,439	809,361	7,922	...
City of Bombay	821,764	...	257,504	564,260	770,843	206,583	...
Kolába	594,872	9,442	...	604,314	605,165	857	...
Ahmednagar	888,755	34,507	...	923,262	837,774	...	85,488
Poona	1,067,800	...	27,382	1,040,418	995,074	...	45,344
Sholápur	750,689	17,679	...	768,368	720,978	...	47,390
Sátára	1,225,989	16,134	...	1,242,123	1,146,521	...	95,602
Ratnágiri	1,105,926	70,058	...	1,175,984	1,166,890	...	9,094
Belgaum	1,013,261	36,813	...	1,050,074	994,209	...	55,865
Dhárwár	1,051,314	50,399	...	1,101,713	1,113,426	11,713	...
Bijápur	796,339	64,774	...	861,113	735,041	...	126,072
Kánara	446,351	9,553	...	455,904	454,238	...	1,666
Surat	649,989	...	4,337	645,652	636,602	...	9,050
Broach	341,490	...	48,087	293,403	291,428	...	1,975
Kaira	871,589	...	105,500	766,089	715,725	...	50,364
Panch Maháls	313,417	...	45,869	267,548	261,870	...	5,678
Ahmedabad	921,712	...	154,483	767,229	795,094	27,865	...
Karáchi	564,880	7	...	564,887	607,439	42,552	...
Hyderabad	884,434	15,296	...	899,730	990,502	90,772	...
Thar and Párkar	332,415	1,778	...	334,193	864,168	29,975	...
Shikárpur	915,497	53,921	...	969,418	1,018,237	48,819	...
Upper Sind Frontier ...	174,548	11,552	...	186,100	232,462	46,362	...
Whole Presidency ...	18,857,044	...	241,547	18,615,497	18,524,640	...	90,857

2. In accordance with the directions of the Government of India as conveyed in letter No. 2740 of 26th March 1901 in the Home Department, published in Government Resolution No. 2292 in the General Department of the Government of Bombay, dated 20th April 1901, the report is shortened as much as possible.

3. The village birth and death registers were examined by the vaccination staff and reports sent to the Deputy Sanitary Commissioners of the discrepancies discovered.

The number of omissions discovered by the staff of the Sanitary Department in 1900 was—

	Births.	Deaths.
In Western Registration District ...	... 157	42
In Central do. ...	... 244	133
In Southern do. ...	... 580	42
In Gujarát do. ...	... 892	82
In Sind do. ...	... 512	2

These omissions were brought to the notice of the Revenue and Municipal authorities by the Deputy Sanitary Commissioners and the defaulters were fined or warned.

4. In the City of Bombay no prosecutions for failure to report the births of children were instituted.

European and Eurasian Vital Statistics.

5. The European and Eurasian statistics are appended in the following table. Appendix VI is omitted. The increased number of deaths is due to cholera, small-pox, diarrhœa and other causes. The cholera and small-pox deaths occurred mostly in Bombay City. It is a pity to leave out all reference o deaths occurring among Civil European and Eurasian population :—

Districts.	No.	Collectorates.	Europeans. Population according to Census of 1891.	Europeans. Number of Births. 1900.	Europeans. Number of Births. 1899.	Europeans. Number of Deaths. 1900.	Europeans. Number of Deaths. 1899.	Eurasians. Population according to Census of 1891.	Eurasians. Number of Births. 1900.	Eurasians. Number of Births. 1899.	Eurasians. Number of Deaths. 1900.	Eurasians. Number of Deaths. 1899.
Western Registration District.	1	Khándesh	239	6	7	8	6	293	11	8	19	6
	2	Násik...	833	18	14	15	8	212	3	7	6	6
	3	Thána	391	5	2	6	4	274	1	1	...	1
	4	City of Bombay ...	10,251	163	141	282	169	4,330	92	96	178	145
	5	Kolába	39	...	...	...	...	2	...	...	...	...
Central Registration District.	6	Ahmednagar ...	332	1	4	3	...	36	...	2	2	1
	7	Poona...	1,993	24	14	18	20	948	10	11	13	9
	8	Sholápur	270	6	8	9	2	164	6	7	5	8
	9	Sátára	207	6	5	6	4	60	..	...	...	...
	10	Ratnágiri	46	...	...	...	...	18	...	...	...	...
Southern Registration District.	11	Belgaum	389	2	...	...	...	354	1	...	2	...
	12	Dhárwár	305	6	11	7	7	476	8	10	9	2
	13	Bijápur	42	1	1	1	...	11	...	...	...	...
	14	Kánara	69	1	1	1	1	126	...	...	...	...
Gujarát Registration District.	15	Surat	90	...	...	...	1	75	3	...	2	1
	16	Broach	31	...	...	1	...	9	...	...	...	...
	17	Kaira...	41	1	1	3	1	19	...	...	...	...
	18	Panch Mahá's ...	19	...	...	1	...	17	1	...	1	...
	19	Ahmedabad	388	10	4	8	3	142	1	1	...	...
Sind Registration District.	20	Karáchi	2,077	4	6	...	2	685	4	13	2	3
	21	Hyderabad	129	2	...	1	...	41	...	...	1	...
	22	Thar and Párkar ...	5	...	...	...	...	9	...	...	...	...
	23	Shikárpur	231	4	2	3	3	208	7	9	5	3
	24	Upper Sind Frontier.	69	...	...	...	...	10	1	1	2	...
			18,486	260	221	373	231	8,519	149	166	247	185
Cantonments in quasi-foreign territory.	1	Aden	Not obtainable.	...	1	...	1	Not obtainable.	...	...	...	...
	2	Baroda		1	...	2	...		...	...	...	...
	3	Bhúj		1	...	...	...		...	...	...	...
	4	Deesa...		5	1	3	...		...	...	2	...
	5	Mhow...		...	3	...	1		...	...	...	...
	6	Nasirabad		...	...	1	1		...	...	...	...
	7	Neemuch		...	...	1	...		...	...	...	...
	8	Rájkot		..	...	1	...		...	1	...	...
				...	7	5	8	8	...	...	1	2	...

6. The causes from which deaths among Europeans and Eurasians were recorded are given in the following table :—

Deaths by causes.

Causes of deaths.		Europeans. 1900. Number of deaths.	Europeans. 1900. Ratio per 1,000 of population.	Europeans. 1899. Number of deaths.	Europeans. 1899. Ratio per 1,000 of population.	Eurasians. 1900. Number of deaths.	Eurasians. 1900. Ratio per 1,000 of population.	Eurasians. 1899. Number of deaths.	Eurasians. 1899. Ratio per 1,000 of population.
Bombay Presidency.	Cholera...	31	1·68	2	·11	23	2·70	...	...
	Small-pox	21	1·14	...	...	11	1·29	1	0·12
	Plague	11	·59	16	·87	12	1·41	32	3·76
	Fevers	35	1·89	27	1·46	19	2·23	16	1·88
	Dysentery and Diarrhœa	59	3·19	26	1·41	44	5·16	21	2·46
	Injuries	10	·54	8	·43	4	·47	8	·94
	Other causes	206	11·14	152	8·24	134	15·73	107	12·56
	All causes ...	373	20·17	231	12·52	247	28·99	185	21·72
Cantonments in quasi-foreign territory.	Cholera...	1	*	...	...	...	*	...	...
	Small-pox	1	*	...	...	...	*	...	...
	Fevers	1	*	...	...	1	*	...	...
	Dysentery and Diarrhœa	1	*	...	...	1	*	...	...
	Injuries...	1	*	...	...	...	*	...	...
	Other causes ...	3	*	3	*	...	*	...	...
	Total ...	8	*	3	*	2	*	...	...

* As the population for the Cantonments in quasi-foreign territory is not obtainable, the ratio of deaths cannot be worked out.

NATIVE POPULATION—VITAL STATISTICS.

Births.

Number of registered births.

7. In the Presidency of Bombay, including Sind, during the year 1900, there were 505,662 births registered, against 685,348 in 1899. The recorded births for the year under report were less by 179,686 than the number registered in the previous year, and also less by 150,597 than the decennial mean ending 1899. By sexes there were 262,837 males and 242,825 females against 355,869 and 329,479 in 1899. In only four districts, Dhárwár, Kánara, Shikárpur and Upper Sind Frontier, did the number of births exceed the deaths.

The recorded birth-rate for the year was 26·87 per mille, the lowest for the past ten years, against 36·42 in 1899 and a decennial mean of 35·32, a result due to the weakness induced by famine. For every 100 male births during the year there were 92·39 female births.

8. From the Annual Form No. 1 in Appendix VIII, it will be seen that for every 100 female births 108·24 male births were recorded; but this proportion is greater in the undermentioned collectorates and districts :—

In Kaira the ratio of male to female birth was			...	114·98
„ Ahmedabad	do.	do.	...	110·66
„ Karáchi	do.	do.	...	120·37
„ Hyderabad	do.	do.	...	132·13
„ Thar and Párkar	do.	do.	...	126·83
„ Shikárpur	do.	do.	...	119·78
„ Upper Sind Frontier	do.	do.	...	128·45

All parts of Sind show an excess of male births and the Deputy Sanitary Commissioner, Sind Registration District, writes: "It would thus appear that the registration of female births is still defective."

Births by months.

9. The monthly distribution of births in 1900, as compared with 1899 and with the monthly mean of the previous ten years, is given in the following table :—

	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Decr.	Total.
Mean for 10 years 1890 to 1899	50,420	46,941	52,115	52,191	55,883	57,506	58,559	58,440	57,472	53,531	55,427	52,774	656,259
1899...	53,043	52,652	57,257	55,801	58,774	58,849	61,088	60,202	58,042	57,250	53,504	53,286	685,348
1900...	50,843	46,935	52,976	50,936	49,960	48,785	40,772	37,970	34,702	33,902	32,335	30,411	505,662

The greatest number (52,976) was registered in the month of March and the least (30,411) in December. The highest and lowest registrations in 1899 occurred in the months of July and February. The famine being most severe in March, April and May, the effect upon the birth-rate would be shown towards the latter part of the year.

10. The number of births recorded during the year is less in every collectorate than in the previous year except in the City of Bombay and the Kánara District. It is most serious in the Gujarát Districts, but all the famine-affected areas have suffered.

11. The Deputy Sanitary Commissioner, Sind Registration District, observes that: "The very low birth-rate recorded in Thar and Párkar District is probably due to the exodus caused by the scarcity which prevailed in the desert areas, and to the effects of the scarcity and to cholera."

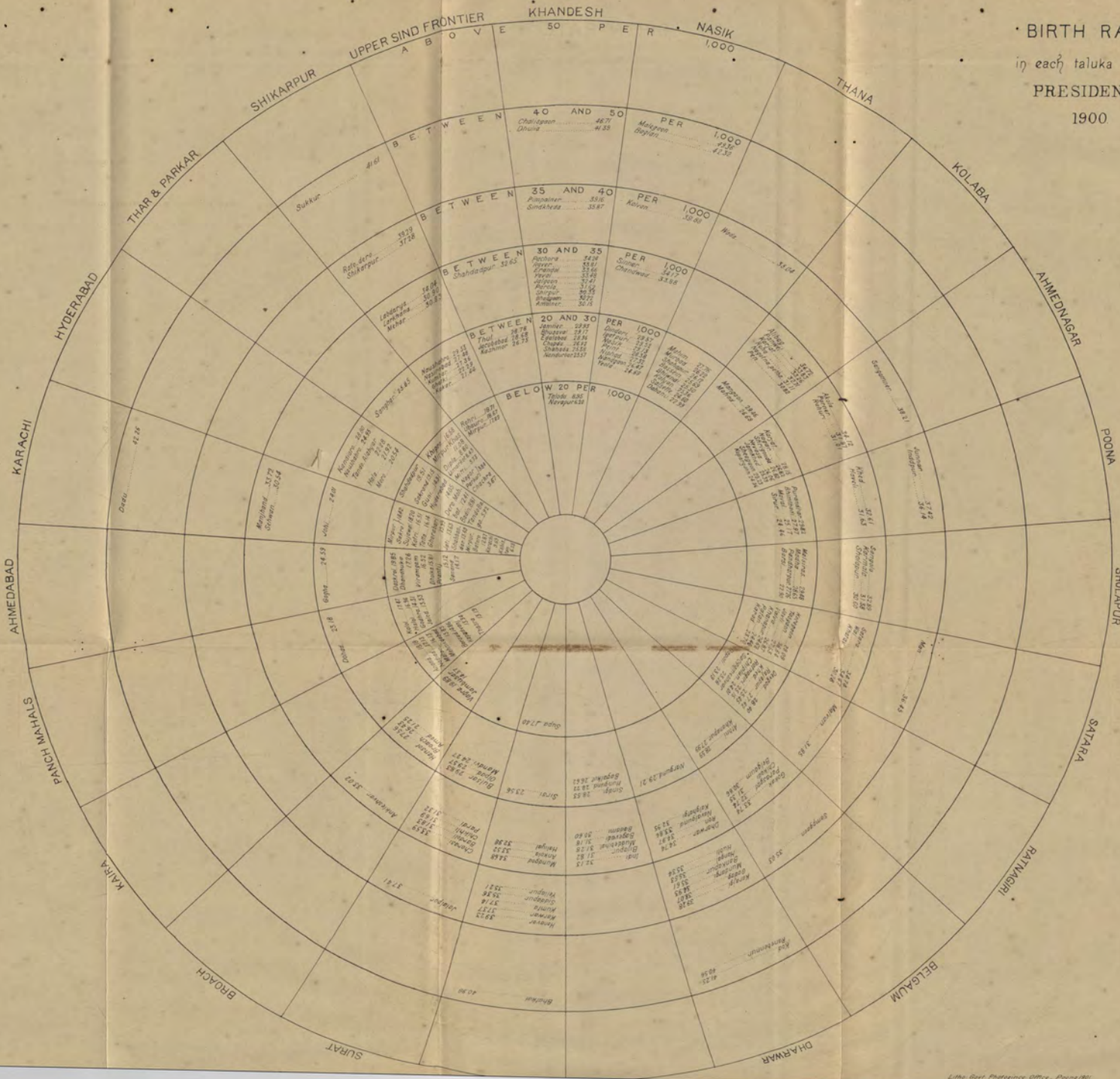
12. The recorded birth-rates among the urban and rural populations of the Presidency were 23·72 and 27·30 against 26·48 and 37·80 in 1899. Except in the collectorates of Khándesh, Ratnágiri, Bijápur, Kánara, Broach, Kaira, Panch Maháls, Ahmedabad and throughout Sind, the birth-rates were higher among the rural than in the urban population. The urban rates were greatly affected by the famine and plague; but it is usual for healthy rural areas to have higher birth-rates than crowded towns.

BIRTH RATE

in each taluka in the

PRESIDENCY

1900



Litho. Govt. Photozinco. Office., Poona 1901.

13. The difference is most marked in the following collectorates :—

	Ratio per 1,000.	
	Rural.	Urban.
Poona	30·92	9·90
Násik	33·34	18·04
Belgaum	31·61	20·44

Whilst in the undermentioned 13 collectorates and districts the birth-rates in the rural population were lower than in the urban, as regards Sind the Deputy Sanitary Commissioner has stated that more attention is paid to registrations in towns, whilst the flocking of people towards large towns in other districts probably helped to make the birth-rate higher in more urban areas than usual. In Poona, Násik and Belgaum, which have been plague-affected as well as famine-stricken, it is probable the families were sent away to rural areas.

	Urban.	Rural.
Karáchi	43·76	21·11
Hyderabad	39·33	17·99
Kaira	36·18	15·74
Shikárpur	44·32	28·40
Panch Maháls ...	31·64	16·45
Thar and Párkar ...	23·53	9·92
Broach	34·06	23·14
Ratnágiri	35·99	25·92
Khándesh	40·10	30·82
Bijápur	34·95	29·83
Kánara	38·17	33·25
Ahmedabad ...	21·43	18·55
Upper Sind Frontier	31·37	28·73

Birth-rate in tálukas.

14. The birth-rate for each rural registration circle is shown in a diagram on the opposite page, which has been drawn so as to show at a glance the rate in each collectorate.

In 9 tálukas the birth-rate was between 40 and 50 per mille. In 23 rural registration circles it was between 35 and 40 per mille, in 56 it was between 30 and 35, in 82 it ranged from 20 to 30, and in 50 it was below 20 per mille, a sad falling off as compared with last year, when in 25 tálukas the birth-rate was over 50 per 1,000 and in 55 between 40 and 50. Of these last 50 rural registration circles 27 are in Sind, 19 are in Gujarát and of the remaining four 2 are situated in the collectorate of Khándesh, one in Sátára and one in Kánara.

Birth-rate in sequence in towns.

15. The diagram showing the recorded birth-rate in 56 towns in the Presidency arranged in sequence of high birth-rate is left out, which is to be regretted as this table enables every town to see where it stands and encourages them to effort.

[redacted] of 56 towns in the Presidency, 10 had a birth-rate exceeding 40 per [redacted] Poona, Belgaum, Ahmednagar, Násik, Bombay, Thána and Karád hav[redacted] low birth-rates.

17. The Municipalities of Nandurbár, Vengurla, &c., deserve credit for the attention they have paid to the registration of births, and show that a high birth-rate is not confined to any particular part of the Presidency.

Birth-rate in Cantonments.

18. The following table contrasts the recorded birth-rate in each cantonment in British territory in 1900 with the result of the previous year:—

Cantonments.	Birth-rate in 1899.	Birth-rate in 1900.
Devláli	19·19	17·00
Málegaon	30·86	19·42
Ahmednagar	26·00	19·02
Poona	14·33	13·07
Kirkee...	25·34	26·26
Belgaum	23·49	20·78
Ahmedabad	16·22	6·99

The results are not good. Kirkee Cantonment has, however, kept up the improvement shown last year. Ahmedabad shows a very low result and is probably indirectly due to famine.

Still-born.

19. During the year 1900, 8,414 children were registered as still-born against 9,653 in 1899. Of these 4,644 were males and 3,770 females against 5,397 and 4,256, respectively, in 1899. These births occurred in the following collectorates:—

Collectorates.	Recorded births.	STILL-BORN.			Percentage of still-born to born alive.
		Urban.	Rural.	Total.	
Khándesh	45,532	10	279	289	·63
Násik	27,287	...	36	36	·13
Thána	20,940	13	152	165	·79
City of Bombay ...	12,433	2,046	...	2,046	16·46
Kolába	18,416	4	265	269	1·46
Ahmednagar	24,847	21	48	69	·28
Poona	29,211	112	207	319	1·09
Sholápur	21,328	1	3	4	·02
Sátára	34,607	27	195	222	·64
Ratnágiri	28,908	3	80	83	·29
Belgaum	31,282	33	362	395	1·26
Dhárwár	38,071	145	941	1,086	2·85
Bijápur	23,861	11	309	320	1·34
Kánara	14,959	16	553	569	3·80
Surat	20,306	142	263	405	1·99
Broach	8,499	116	64	180	2·12
Kaira	15,068	96	153	249	1·65
Panch Mahals... ...	5,676	16	32	48	·85
Ahmedabad	17,641	499	13	512	2·90
Karáchi	14,042	313	88	401	2·86
Hyderabad	17,064	136	56	192	1·12
Thar and Párkar ...	3,348	1	22	23	·69
Shikárpur	27,301	251	232	483	1·77
Upper Sind Frontier ...	5,035	20	29	49	·97
Presidency ...	505,662	4,032	4,382	8,414	1·66

20. The total number of still-born in 1900 is less than the previous year, but, of course, the total birth-rate is lower and affects these percentages of still-born to born alive, which are 1·66 against 1·41 in 1899. The City of Bombay shows high percentage of still-born to born alive, due to plague and other causes. The excess in Kánara is due to well-known climatic causes; but it is to be noted

that though the number of births is greater this year, the percentage of still-born has sunk from 5·31 to 3·80. The ratio has gone up in the Collectorates of Thána, Ahmednagar, Belgaum and Bijápur and in the Gujarát and Sind Districts. In the districts, except Sind, this increased rate is due to famine causes.

Deaths.

Number of deaths.

21. Among the civil population in the rural, town and cantonment circles in the Presidency 1,318,783 deaths were registered during the year 1900. In 1899, 672,269 deaths, or 646,514 less than in 1900, were recorded. This result is chiefly due to famine.

The following statement shows the number of deaths recorded in each year since 1890 :—

1890 ...	... 463,616	1896 ...	... 596,472
1891 ...	... 513,132	1897 ...	... 749,916
1892 ...	... 611,742	1898 ...	... 548,825
1893 ...	... 511,831	1899 ...	... 672,269
1894 ...	... 607,179	1900 ...	... 1,318,783
1895 ...	... 538,540		

22. Of the total deaths registered, 706,275 occurred among males and 612,508 among females against 355,241 and 317,019, respectively, in 1899.

Death-rate.

23. The death-rate per mille in 1900 was 70·07 against 35·72 in 1899 and a decennial mean of 31·28.

Male and female death-rates.

24. The millesimal rate of males dying to males living was 72·53 and of females dying to females living was 67·43. In 1899 these ratios were, respectively, 36·48 and 34·90. For every 100 females who died, 115·31 deaths among males were recorded, but these proportions vary considerably in the following collectorates and districts :—

In Násik the ratio of male to female deaths was			116·79 per cent.
In the City of Bombay	do.	do.	133·69 „
In Ahmednagar	do.	do.	116·42 „
In Sholápur	do.	do.	117·11 „
In Kaira	do.	do.	124·02 „
In Panch Maháls	do.	do.	123·19 „
In Karáchi	do.	do.	127·88 „
In Hyderabad	do.	do.	124·46 „
In Thar and Párkar	do.	do.	134·89 „

Deaths by districts.

25. The following table shows for each registration district the population enumerated at the Census of 1891, the number of deaths recorded in 1900 by sexes and their ratios per mille :—

Registration Districts.	Population according to Census of 1891.			Number of Deaths.			Ratio per 1,000 of Population.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Western Registration District ...	2,409,930	2,111,366	4,521,296	202,544	172,561	375,105	84·05	81·73	82·96
Central do. ...	2,500,086	2,530,647	5,030,733	128,891	114,814	243,705	51·55	45·37	48·44
Southern do. ...	1,670,334	1,634,094	3,304,428	60,043	56,183	116,226	35·95	34·38	35·17
Gujarát do. ...	1,592,090	1,505,022	3,097,112	259,864	224,750	484,614	163·22	149·33	156·47
Sind do. ...	1,564,946	1,301,831	2,866,777	54,933	44,200	99,133	35·10	33·95	34·58
Our residency ...	9,737,386	9,082,960	18,820,346	706,275	612,508	1,318,783	72·53	67·43	70·07

26. The highest death-rate occurred in the Gujarát Registration District, which, with the Western and Central Districts, suffered severely from famine. The Southern and Sind Registration Districts were not nearly so severely affected by famine.

27. The death-rates in 1900 were higher than the decennial mean in all the Collectorates except Dhárwár and Kánara, and also higher than in the previous year in all the Collectorates except the Collectorates of Belgaum, Dhárwár and Kánara.

28. The Deputy Sanitary Commissioners, Western Registration District, Central Registration District and Gujarát Registration District, attribute the high mortality to famine. The Deputy Sanitary Commissioners, Western Registration District and Gujarát Registration District, are both of opinion that all the mortality has not been registered owing to defective registration and the confusion caused by the sudden and sweeping outbreaks of cholera, and the Deputy Sanitary Commissioner, Gujarát Registration District, is inclined to attribute one-third of the total deaths to immigrants.

The Deputy Sanitary Commissioner, Southern Registration District, considers the chief causes of mortality to be plague in Belgaum and Dhárwár and cholera in Belgaum, Dhárwár and Bijápur Districts. The Southern Registration District alone shows a lesser rate of mortality than in the previous year though it is above the ten years' mean.

29. The highest death-rates are shown by the Collectorates of Panch Maháls, Ahmedabad, Broach and Kaira, all in Gujarát, and the lowest is found in the Upper Sind Frontier.

30. In every Collectorate the death-rates amongst males were in excess of those amongst females, except in the City of Bombay, Shikárpur and the Upper Sind Frontier. In 1899, the female death-rates exceeded those among males in the City of Bombay and the Upper Sind Frontier.

Birth and death-rates compared by Collectorates.

31. Comparing the birth and death-rate in each Collectorate for 1900, the birth-rate was much below the registered death-rate in all the Collectorates except Shikárpur and Upper Sind Frontier. In the Collectorates of Shikárpur and Upper Sind Frontier, the recorded birth-rates (29·54 and 28·86 per 1,000) were above the registered death-rates (25·99 and 25·42). In all other Collectorates the recorded death-rates were higher than the registered birth-rates. The difference is noticeable in the following Collectorates :—

Collectorates.	Birth-rate.	Death-rate.
Panch Maháls	18·11	281·06
Ahmedabad...	19·15	173·03
Broach	24·89	163·82
Kaira	17·29	148·44
City of Bombay	15·42	97·76
Khándesh	31·32	97·03
Surat	31·25	79·84
Thána	25·57	71·64
Thar and Párkar	10·07	55·88
Násik	32·44	76·42

The Deputy Sanitary Commissioner, Western Registration District, remarks that "the outstanding features of the vital statistics of the Western Registration District for the year 1900 are the enormous increase in the registered mortality and the hardly less marked falling off in the number of births.

"Both are effects of the same cause, famine, which lowers the birth-rate by enfeebling the people and by breaking up families in the search for work, while in time of famine few marriages take place.

"The increased mortality has shown itself under every heading except plague, which is now gradually losing power in Western India. The greatest rise in mortality has occurred in Khándesh, which records a death-rate of 97·03 per 1,000 compared with 39·86 for the previous year. The death-rate, high as it is, falls far short of the actual fact, the defective registration of births and deaths in the hilly western and northern portions and the Bhil country generally making even an attempt at an estimation impossible."

The Deputy Sanitary Commissioner, Southern Registration District, remarks "the low birth-rate recorded in 1900 must be ascribed to famine and plague prevalence. The usual routine measures to obtain accurate registration were carried out. To obtain accurate data compulsory registration will eventually have to be enforced. Amongst the causes of death, plague was prominent in Belgaum and Dhárwár Districts and cholera in Belgaum, Dhárwár and Bijápur Districts."

The Deputy Sanitary Commissioner, Gujarát Registration District, states that "the increase in the number of deaths is due directly or indirectly to famine; directly through deaths from starvation, and indirectly through the reduced condition of the people engendering a predisposition to disease."

Deaths by ages.

32. As regards deaths by ages, the figures show that by ratio per 1,000 of population the largest number of deaths took place in the period "under one year of age" and next in the age-period "60 years and upwards," the lowest ratio being in the period 15 and under 20 years of age relatively compared with the previous year, a by no means healthy year: the greatest increase in mortality is in the age-period 5 and under 10 years.

Taking the percentage on total deaths, the age period "1 and under 5 years" gives the highest figures and then the period "60 years and upwards".

The total deaths by sexes under the different ages in 1900 in each collectorate are given in Annual Form IV in the Appendix.

Deaths by caste or class.

33. The deaths by caste in each collectorate are given in Annual Form V in the Appendix.

Deaths by causes.

34. The subjoined table shows the deaths in 1900 arranged according to the specified causes laid down by the Government of India and contrasted with the results for 1899 and with the decennial mean. The "causes of deaths" will be briefly noticed in the next section:—

Causes of deaths.	Mean for 10 years 1890 to 1899.		1899.		1900.	
	Number.	Ratio per 1,000 of population.	Number.	Ratio per 1,000 of population.	Number.	Ratio per 1,000 of population.
Cholera	23,077	1·24	8,579	·46	163,889	8·71
Small-pox	3,024	·16	1,946	·10	9,885	·52
Plague	Not available.		96,596	5·13	33,196	1·76
Fevers	382,332	20·57	228,438	12·14	543,319	28·87
Dysentery and diarrhœa	46,568	2·51	74,736	3·97	218,243	11·59
Injuries	6,276	·34	7,102	·38	8,224	·44
Other causes ...	120,076	6·41	254,872	13·54	342,027	18·17
All causes ...	581,353	31·28	672,269	35·72	1,318,783	70·07

35. During 1900 the greatest number of deaths (162,555) took place in July and the least (66,250) in December. In 1899 the greatest and least numbers occurred in March (65,190) and June (42,282).

The heavy mortality, which is shown by an increase under every heading except plague, is due to famine.

Number of Circles.

36. Statistical returns are received from 220 rural and 56 town circles, from 7 cantonments in British and 8 in foreign territory. The population, according to the census of 1891 of the rural circles, was 16,515,973, of the town circles 2,238,399 and of the cantonments in British territory 65,974, exclusive of Europeans and Eurasians, or a total of 18,820,346.

37. The recorded death-rates among the urban and rural population of the Presidency were, respectively, 102·33 and 65·57 per 1,000 of population against

64·10 and 31·76 in 1899. Among the rural population the death-rate was higher than in the urban population in the Collectorates of Kolába, Ahmednagar, Dhárwár, Kánara and Surat.

38. In the undermentioned 18 collectorates and districts the death-rates in the rural population were lower than in the urban :—

Collectorates.	Urban.	Rural.	Collectorates.	Urban.	Rural.
Khándesh	119·93	96·11	Broach	186·96	159·65
Násik	101·54	74·85	Kaira	251·95	139·96
Thána	75·84	71·47	Panch Maháls	564·25	253·68
Poona	62·61	47·47	Ahmedabad	196·85	166·68
Sholápur	96·49	48·04	Karáchi	83·98	36·93
Sátára	51·22	41·08	Hyderabad	55·99	28·95
Ratnágiri	48·62	35·06	Thar and Párkar ...	332·34	52·76
Belgaum	64·39	42·00	Shikárpur	46·24	24·46
Bijápur	49·08	31·42	Upper Sind Frontier ...	63·45	23·52

Death-rate in rural circles.

39. The death-rate in each táluka (rural registration circle) in the Presidency and in Sind is shown in the diagram on the opposite page, from which it will be seen that 137 tálukas recorded a high death-rate, over 40 per mille. In 39 rural circles the death-rate was between 30 and 40 per mille, in 24 it was between 25 and 30, in 12 between 20 and 25, and in 8 the death-rate recorded was below 20 per mille.

40. In the previous year the tálukas showing a rate of over 40 per 1,000 mortality numbered 64.

The 8 tálukas showing a death-rate of under 20 per 1,000 are Naushahro, Kandiáro, Sákrand, Ubauro, Rohri, Ghotki, Mirpur, Mathelo and Kashmor. Last year these tálukas numbered 46.

Death rates in towns.

41. Very high death-rates are shown in the town circles; no less than sixteen town circles showing death-rates of over 100 per 1,000 and twelve of these towns are in Gujarát, the province most severely affected by famine. This is no doubt due to the large numbers of people flocking to towns in search of subsistence and many arriving in an exhausted condition.

As will be seen from Annual Form No. VI the mortality in all the towns is, for the year under report, in excess of the mean of the previous five years, except in the Dhárwár District, Wái in the Sátára District, Gokák in the Belgaum District and Kaládgi in the Bijápur District.

In the towns of Nandurbár in the Khándesh District, Umarkot in the Thar and Párkar District and throughout the Gujarát towns the mortality ratios are very high. These are all towns in areas severely affected by famine and the mortality is due to the number of refugees flocking to these towns in search of subsistence and arriving on getting into such poor condition that they could not withstand the onset of disease. The inclusion, in some cases, of the mortality of the poor-houses in the town areas has attributed to increase the ratios.

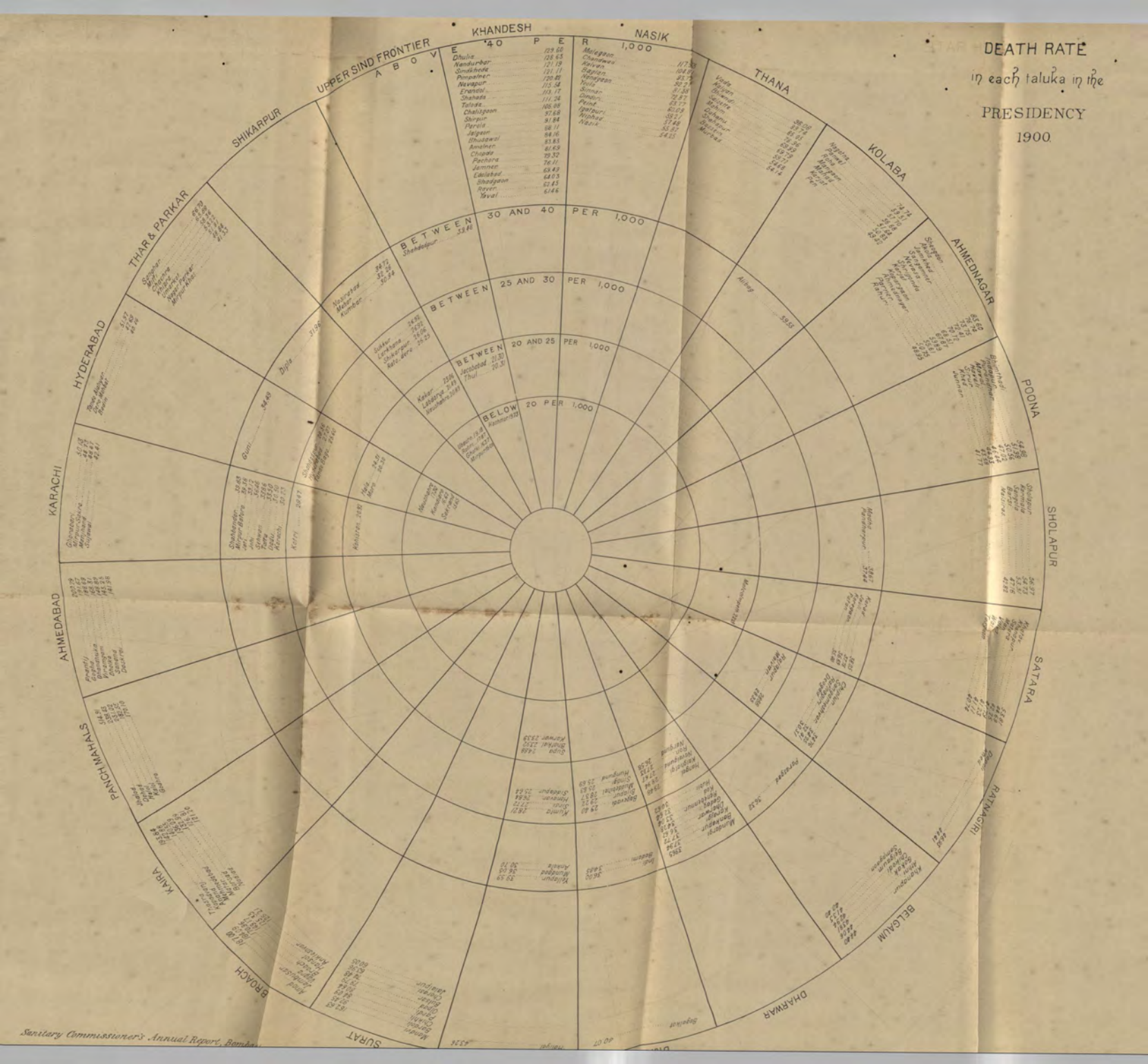
The towns in the areas, also, which have not suffered from famine, such as Kolába, Ratnágiri and Kánara, have been indirectly affected, probably by an influx of people, as the death ratios in them also are above the five-year mean.

Death-rate in Cantonments in British territory.

42. The following table shows the recorded death-rate from all causes in each of the seven cantonments in British territory during 1900, contrasted with the results of the preceding year :—

Cantonments.	Ratio of deaths per 1,000 of Population.		Cantonments.	Ratio of deaths per 1,000 of Population.	
	1899.	1900.		1899.	1900.
Devláli	43·18	20·93	Kirkee	42·47	21·34
Málegaon ...	40·44	85·43	Belgaum ...	79·19	49·94
Ahmednagar ...	33·40	12·26	Ahmedabad ...	10·35	30·20
Poona	59·61	27·88			

DEATH RATE
in each taluka in the
PRESIDENCY
1900



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These figures show that under the military rules prevalent in cantonments wanderers were promptly drafted to suitable centres such as poor-houses, &c. The increase in Málegaon is due probably to the fact that it is a cantonment only in name, no troops being stationed there and the town adjacent was full of famine wanderers, a large poor-house being maintained. Ahmedabad Cantonment was also in a famine district, but the increase is due to an outbreak of cholera owing to the drinking of impure river water.

Statistics of cantonments in quasi-foreign territory.

43. The following table shows the vital statistics of the civil population of those cantonments which are situated in quasi-foreign territory. The total number of births registered in these cantonments during the year 1900 was 2,612 against 3,360 in 1899, the birth-rate being 24·37 per mille against 31·35 in 1899. The recorded birth-rates in 1900 were lower than in 1899 :—

Cantonments.	Ratio per 1,000 of Population.	
	Birth-rate in 1900.	Birth-rate in 1899.
Aden (Municipal limits)	15·17	15·74
Baroda...	17·46	38·13
Bhúj	8·41	18·93
Deesa	32·30	44·25
Mhow	27·24	38·97
Nasirabad	39·95	47·74
Neemuch	22·17	32·18
Rájkot...	6·66	13·33

44. The total number of deaths in these cantonments during the year 1900 was 8,946, equal to a ratio of 83·47 per mille, against 4,384 or 40·90 in 1899. Cholera was prevalent in the Cantonments of Aden (Municipal limits), Baroda, Deesa, Mhow, Nasirabad and Neemuch, and caused 410 deaths, of which 223 took place in the Cantonment of Nasirabad, 129 in Neemuch, 41 in Baroda, 9 in Deesa, 6 in Mhow and 2 in Aden (Municipal limits). In 1899 no deaths from cholera were recorded during the year. Small-pox caused 59 deaths, and of these 37 were recorded in the Cantonment of Nasirabad, 8 in Aden (Municipal limits), 5 in Mhow, 5 in Neemuch and 4 in Deesa. In 1899, 52 deaths were recorded from this disease.

45. The death-rates during the year 1900 were higher than the year 1899.

45*a*. During the year there were 569 deaths from plague in Aden (Municipal limits 525, and 44 deaths in the purely civil portion of the cantonment) :—

Cantonments.	Population according to Census of 1891.	Area in square miles.	Average population per square mile.	Number of birth	Ratio of births per 1,000 of population.	Number of Deaths from							Ratio of Deaths per 1,000 of Population.						
						Cholera.	Small-pox.	Fever.	Dysentery and Diarrhœa.	Injuries.	Other causes.	All causes.	Cholera.	Small-pox.	Fever.	Dysentery and Diarrhœa.	Injuries.	Other causes.	All causes.
Aden. { Municipal limits	38,422	...	...	583	15·17	2	8	1,015	173	13	825	2,036	·05	·21	26·42	4·50	·34	21·47	52·99
Aden. { Purely civil population of Cantonments	162	*5·	37·72	...	...	...	...	47	1	...	7	55	...	...	290·12	6·17	...	43·21	339·50
Baroda	2,806	1·	28·06	49	17·46	41	..	82	144	1	114	382	14·61	...	29·22	51·32	0·36	40·62	136·13
Bhúj	951	1·04	914·42	8	8·41	...	...	10	...	...	16	26	...	...	10·51	...	...	16·82	27·34
Deesa	8,452	5·	1,690·40	273	32·30	9	4	254	74	1	338	680	1·06	0·47	30·05	8·75	0·12	39·99	80·45
Mhow...	21,400	6·50	3,292·35	583	27·24	6	5	837	33	3	511	1,450	0·28	0·23	41·45	1·77	0·14	23·87	67·75
Nasirabad	19,396	8·00	2,424·50	775	39·95	223	37	904	398	10	609	2,181	11·50	1·90	46·60	20·52	0·52	31·39	112·41
Neemuch	15,291	4·52	3,382·36	339	22·17	129	5	726	31	4	1,229	2,124	8·44	·33	47·48	2·03	·26	80·37	138·91
Rájkot	300	not	given.	2	6·66	...	...	5	...	...	7	12	...	...	16·67	...	...	23·33	40·00
Total ...	107,189	31·06	3,450·74	2,612	24·37	410	59	3,930	859	32	3,656	8,946	3·83	·55	36·67	8·01	·30	34·11	83·47

* This is the area of the whole Cantonment, Military and Civil. The population being mixed up with the Military, it is impossible to give the population per square mile.

SECTION VI.

HISTORY OF CHIEF DISEASES.

CHOLERA.

Mortality in 1900.

46. In the year 1900 there were 163,889 deaths recorded as due to cholera compared with 8,579 deaths from the same cause in 1899. Every district in the Presidency was affected, the Collectorate of Kánara escaping lightly with only 82 deaths during the year. Khándesh, Thána, Sátára and the Gujarát Districts suffered severely, and it is doubtful if all the deaths under this heading in the Khándesh and Gujarát Districts were entered, owing to the suddenness and virulence of the outbursts.

Monthly mortality.

47. In December 1899 cholera deaths were reported from the Collectorates of Dhárwár and Bijápur and the City of Bombay. In January of the year under report, the disease continued in the same collectorates, Khándesh being affected in addition. There were 388 deaths reported, but out of these 352 were recorded in Khándesh alone. In the month of February the same districts, except Bijápur, returned deaths, Sholápur returning one death only in addition. In the month of March the same collectorates continued to be affected, but instead of Sholápur the Collectorate of Násik began to return deaths. In April the mortality was especially heavy in the Collectorates of Khándesh and Násik, 8,260 deaths and 2,908 being respectively reported. During the same month, in addition to the above, all the Gujarát Districts and the districts of Thána, Ahmednagar, Poona and Sátára were affected, and the districts of Sholápur and Bijápur, in which cholera had ceased, again reported deaths. In May all the districts returned deaths from cholera except Kánara, Karáchi, Hyderabad, Shikárpur and the Upper Sind Frontier. In June the Collectorate of Hyderabad was affected in addition, and in July, in which the largest number of deaths for the year was returned, all collectorates, except the districts of Kánara and Upper Sind Frontier, were affected. From August, however, the mortality rapidly diminished month by month, but deaths were reported from Kánara in this month and from the Upper Sind Frontier in September. In December 488 deaths were reported from 9 Registration Circles—Bombay City (16), Poona (3), Ratnágiri (13), Belgaum (96), Dhárwár (171), Bijápur (44), Kánara (32), Karáchi (107) and Hyderabad (6).

Mortality by seasons.

48. The table given below shows the mortality from cholera by seasons. 106,193 deaths occurred in the rainy season of 122 days; 4,805 in the hot and dry season of 61 days; 6,870 in the cold season of 121 days; and 2,811 in the hot and damp season of 61 days:—

Years.	Cold season (121 days).				Hot and dry (61 days).		Rainy season (122 days).				Hot and damp (61 days).		Total deaths from cholera.
	December (31).	January (31).	February (28).	March (31).	April (30).	May (31).	June (30).	July (31).	August (31).	September (30).	October (31).	November (30).	
1899	28	23	548	1,568	1,980	2,199	911	478	329	198	234	33	8,579
1900	488	888	585	5,409	15,086	32,929	33,625	44,521	23,123	4,924	1,596	1,215	163,889

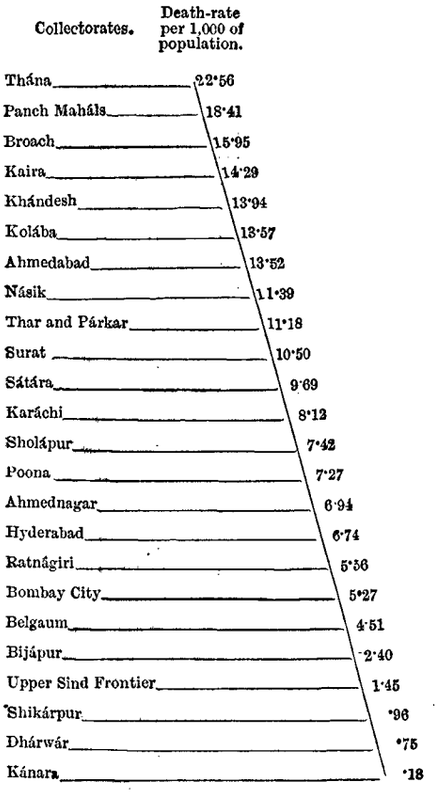
Mortality for 20 years from 1881 to 1900 inclusive.

49. The next table shows the total number of deaths from cholera in each of the twenty years ending 1900:—

1881...	...	...	16,694	1891	...	...	17,850
1882...	...	...	7,904	1892	...	...	42,900
1883...	...	...	37,954	1893	...	...	18,853
1884...	...	...	13,804	1894	...	...	33,588
1885...	...	...	37,287	1895	...	...	8,890
1886...	...	...	167	1896	...	...	35,404
1887...	...	...	25,711	1897	...	...	57,109
1888...	...	...	36,500	1898	...	...	4,368
1889...	...	...	32,431	1899	...	...	8,579
1890...	...	...	3,259	1900	...	...	163,889

Death-rate by Collectorates.

50. The following diagram exhibits the death-rate from cholera per 1,000 of population in the affected collectorates arranged in order of highest death-rate :—



In the Thána Collectorate the death-rate attains the highest ratio of 22·56 per 1,000 of population, partly due to a large influx of necessitous people and in the other collectorates affected by famine, except Belgaum and Bijápur, it also shows very high ratios.

Mortality in rural circles.

51. Out of 220 rural circles or tálukas, 201 were more or less affected by cholera. The following table shows, in order of highest death-rate, the rural circles, 58 in all, in which the death-rate from cholera exceeded 12 per 1,000 of population, and that the disease principally prevailed in 9 tálukas of each of the Thána and Khándesh Collectorates; in 5 of each of the Násik, Kolába and Karáchi Collectorates; in 4 of each of the Collectorates of Ahmedabad, Kaira and Surat; in 3 of the Broach Collectorate; in 2 of the respective Collectorates of Ahmednagar, Sátára, Panch Mahâls and Thar and Párkar; and in one of each of the Collectorates of Hyderabad and Ratnágiri :—

Number in Sequence.	Name of Rural Circle.	Name of Collectorate.	Population of the Circle.	Number of Cholera deaths.	Ratio per 1,000 of Population.
1	Váda R. C....	Thána	39,327	1,560	39·67
2	Jhálod „ ...	Panch Maháls ...	49,323	1,938	39·29
3	Petha Nágcthna „ ...	Kolába	22,791	828	36·33
4	Gogha „ ...	Ahmedabad	26,384	899	34·07
5	Kalyán „ ...	Thána	67,497	2,152	31·88
6	Bhiwndi „ ..	Do.	87,444	2,781	31·80
7	Mitti „ ...	Thar and Párkar ...	31,786	989	31·31
8	Pimpalner „ ..	Khándesh	59,192	1,849	31·29
9	Dohad „ ...	Panch Maháls ...	55,741	1,719	30·84
10	Jambusar „ ...	Broach	70,324	2,097	29·82
11	Dáhánu „ ...	Thána	134,388	3,749	27·90
12	Dhulia „ ...	Khándesh	76,257	2,063	27·05
13	Nandurbár „ ...	Do.	67,565	1,809	26·77
14	Mándvi „ ...	Surat	53,937	1,414	26·21
15	Akola „ ...	Ahmednagar	68,002	1,765	25·95
16	Málegaon „ ...	Násik	82,469	1,948	23·62
17	Navápur Petha „ ...	Khándesh	30,627	713	23·28
18	Sindkheda „ ...	Do.	73,379	1,593	21·71
19	Chándor „ ...	Násik	51,476	1,070	20·78
20	Sháháda „ ...	Khándesh	64,733	1,336	20·64
21	Máhim „ ...	Thána...	85,832	1,715	19·98
22	Prántíj „ ...	Ahmedabad	116,135	2,294	19·75
23	Bassein „ ...	Thána	76,092	1,494	19·63
24	Sálsette „ ...	Do.	108,664	1,998	18·39
25	Dhandhuka „ ...	Ahmedabad	124,926	2,272	18·19
26	Hánsot „ ...	Broach	26,419	471	17·83
27	Thásra „ ...	Kaira	95,605	1,692	17·70
28	Báglán „ ...	Násik	65,647	1,119	17·05
29	Sháhbandar „ ...	Karáchi	28,246	470	16·64
30	Mángaon „ ...	Kolába	83,837	1,378	16·44
31	Roha „ ...	Do.	46,063	753	16·35
32	Sujával „ ...	Karáchi	29,501	466	15·80
33	Mahád „ ...	Kolába	112,313	1,767	15·73
34	Shirpur „ ...	Khándesh	55,012	870	15·53
35	Chálisgaon „ ...	Do.	74,869	1,158	15·47
36	Mánjhand „ ...	Karáchi	19,663	296	15·05
37	Tando Allahyár „ ...	Hyderabad	75,914	1,138	14·99
38	Borsad „ ...	Kaira	149,963	2,221	14·81
39	Mirpur Batoro „ ...	Karáchi	35,191	520	14·78
40	Sinnar „ ...	Násik	73,137	1,080	14·77
41	Panvel „ ...	Kolába	97,415	1,432	14·70
42	Sháhápur „ ...	Thána	124,020	1,759	14·18
43	Daskroi „ ...	Ahmedabad	147,490	2,090	14·17
44	Erandol „ ...	Khándesh	105,806	1,474	13·93
45	Ghorábári „ ...	Karáchi	30,518	413	13·53
46	Párdi „ ...	Surat	58,242	780	13·39
47	Khed „ ...	Ratnágiri	100,550	1,334	13·27
48	Olpád „ ...	Surat	66,660	882	13·23
49	Bulsár „ ...	Do.	73,110	964	13·19
50	Nadiád „ ...	Kaira	142,036	1,873	13·18
51	Sánghar „ ...	Thar and Párkar ...	27,929	365	13·07
52	Khatáv „ ...	Sátára	95,217	1,233	12·95
53	Válva „ ...	Do.	192.252	2,485	12·93
54	Mátar „ ...	Kaira	79,080	1,009	12·76
55	Kalvan „ ...	Násik	58,964	751	12·74
56	Ámod „ ...	Broach	38,545	486	12·60
57	Murbád „ ...	Thána	65,640	824	12·55
58	Sangamner „ ...	Ahmednagar	73,199	907	12·39

Mortality in towns.

52. Out of 56 town circles, 51 were affected by cholera during the year. The following table shows those town circles in which the death-rate exceeded 10 per 1,000 of population. Out of these, 12 are situated in the Gujarát Registration District and among them Borsad Town, where the death-rate rises to 126·90 per 1,000 of population, heads the number.

In or close by most of these towns was a poor-house or relief work, and as in most cases the deaths were included in the town returns if the work or poor-house was within the municipal limits, it has of course raised the death-rate, as the increased population is not taken into account :—

Number.	Towns.	Collectorate.	Population.	Number of Cholera deaths.	Ratio per 1,000 of Population.
1	Borsad T.C....	Kaira	12,159	1,543	126·90
2	Gogo „ ...	Ahmedabad	6,637	474	71·42
3	Umarkot „ ...	Thar and Párkar ...	3,698	206	55·71
4	Nandurbár „ ...	Khándesh	7,670	381	49·67
5	Dohad „ ...	Panch Mahál ...	12,935	564	43·60
6	Kaira „ ...	Kaira...	10,101	338	33·46
7	Kapadvanj „ ...	Do.	14,805	487	32·89
8	Mahád „ ...	Kolába	6,869	180	26·20
9	Násik „ ...	Násik	24,406	628	25·68
10	Wái „ ...	Sátára	12,436	311	25·01
11	Viramgám „ ...	Ahmedabad	23,197	540	23·28
12	Pandharpur „ ...	Sholápur	19,953	452	22·65
13	Bársi „ ...	Do.	20,552	462	22·48
14	Alibág „ ...	Kolába	5,886	120	20·39
15	Karád „ ...	Sátára	25,748	249	20·36
16	Nadiád „ ...	Kaira	29,044	574	19·76
17	Broach „ ...	Broach	40,137	766	19·08
18	Chopda „ ...	Khándesh	15,655	295	18·84
19	Jambusar „ ...	Broach	12,070	227	18·81
20	Sangamner „ ...	Ahmednagar	9,783	151	15·51
21	Thána „ ...	Thána...	17,455	264	15·12
22	Godhra „ ...	Panch Mahál ...	14,691	215	14·64
23	Kalyán „ ...	Thâna...	12,608	184	14·59
24	Dhulia „ ...	Khándesh	21,871	302	13·81
25	Sholápur „ ...	Sholápur	61,564	781	12·69
26	Yeola „ ...	Násik	18,861	229	12·14
27	Ahmednagar „ ...	Ahmednagar	36,031	418	11·60
28	Dholka „ ...	Ahmedabad	16,494	190	11·52
29	Bulsár „ ...	Surat	14,714	154	10·47

Cholera in Cantonments.

53. All of the cantonments in the Presidency, that is, 7 in number, were affected by cholera during the year. In Málegaon the highest number of deaths, namely, 100 or 26·23 per 1,000 of population, took place; and only one death, the minimum, among them occurred in the Belgaum Cantonment.

Number.	Cantonments.	Collectorate.	Population.	Number of Cholera deaths.	Ratio per 1,000 of Population.
1	Málegaon	Násik	3,759	100	26·23
2	Deoláli	Do.	2,293	11	4·80
3	Ahmednagar	Ahmednagar ...	4,730	12	2·54
4	Poona	Poona...	31,134	44	1·41
5	Kirkee	Do.	9,749	17	1·74
6	Belgaum	Belgaum	10,733	1	0·09
7	Ahmedabad	Ahmedabad ...	3,576	30	8.39

Villages affected by cholera.

54. The affected area included 8,461 out of 25,143 villages in the Presidency. The highest percentage took place in Karáchi, where out of its 791 villages 694 or 87·74 per cent. were affected. In Hyderabad, Kaira, Broach, Thána and Surat the percentages were 66·90, 50·78, 50·12, 47·91 and 43·52, respectively,

and in Sátára also out of its 1,343 villages 572 or 42·59 were affected, but in the remaining collectorates the percentages were below 40 per cent.

Collectorate.	Total Villages.	Villages affected by Cholera.	Percentages of affected Villages to total Villages.
Khándesh	2,824	981	34·74
Násik...	1,643	459	27·94
Thána...	1,624	778	47·91
Kolába	1,463	386	26·38
Ahmednagar	1,345	385	28·62
Poona...	1,187	420	35·38
Sholápur	713	263	36·89
Sátára	1,343	572	42·59
Ratnágiri	1,308	362	27·68
Belgaum	1,072	197	18·38
Dhárwár	1,299	74	5·70
Bijápur	1,110	124	11·17
Kánara	1,183	11	·93
Surat...	795	346	43·52
Broach	403	202	50·12
Kaira...	579	294	50·78
Panch Mahals	654	211	32·26
Ahmedabad	852	309	36·27
Karáchi	791	694	87·74
Hyderabad	1,308	875	66·90
Saikárpur	1,103	150	13·60
Thar and Párkar	250	*308	
Upper Sind Frontier ...	294	60	20·41
Total ...	25,143	8,461	33·65

* Majority of these are hamlets.

Collectorates in which cholera first appeared in towns and those in which it first invaded villages.

55. The following table shows the collectorates in which cholera first appeared in towns and those in which it first invaded villages :—

Collectorates in which Cholera first appeared in Towns.			Collectorates in which Cholera first appeared in Villages.		
Collectorates.	Towns and Cantonments.	Date of first appearance.	Collectorates.	Villages.	Date of first appearance.
Násik	Málegoan Cantonment	9th March 1900.	Khándesh ...	Patonde	2nd January 1900.
Bombay	Bombay City ...	1st January „ .	Thána	Kawad Khurda ...	27th April „
Poona	Poona City ...	28th April „ .	Kolába	Sheloo	14th May „
Sholápur... ...	Sholápur ...	27th February „ .	Ahmednagar ...	Gogalgaon... ...	1st April „
Dhárwár... ...	Gadag-Bettigeri .	22nd January „ .	Sátára	Wakuta Malawadi.	23rd April „
Panch Mahals ...	Godhra	21st April „ .	Ratnágiri ...	Panderi	26th May „
Ahmedabad ...	Ahmedabad .	20th April „ .	Belgaum ...	Akkiwat	14th May „
Karáchi	Karáchi... ...	7th May „ .	Bijápur	Madgunaki ...	1st January „
Thar and Párkar .	Umarkot ...	24th May „ .	Kánara	Haliyal	10th August „
Upper Sind Frontier.	Jacobabad ...	4th Sept. „ .	Surat	Katargam	3rd April „
			Broach	Manglesbar ...	29th April „
			Kaira	Thasra	16th April „
			Hyderabad ...	Mangar	20th June „
			Shikárpur ...	Bhagchand ...	24th July „

Attacks and deaths.

56. The mean percentage of deaths to attacks from the returns received amounts to 66·44. Bombay City shows the high percentage of 88·49 followed by Thána with 83·95. In Bijápur Collectorate the mortality was the lightest, being 51·93 of those attacked.

57. The map and statement are omitted as directed by the Government of India.

Cholera-producing causes.

58. The Deputy Sanitary Commissioner, Western Registration District, writes that bad and scanty drinking water, insufficient and unsuitable food operating on the crowds of beggars and wanderers, who sought the larger villages and towns in search of relief, were sure to induce an outbreak of the disease in an epidemic form. He also adds that in the hilly districts the Bhils and other hill-tribes lived on roots and bark of trees and the flesh of cattle which had died of starvation or disease, and on admission into poor-houses or relief camps many were found to be suffering from dysentery or other intestinal irritation, and very many developed these diseases after receiving ordinary food. The heading Dysentery and Diarrhœa also undoubtedly includes many deaths from cholera, which at the beginning of an outbreak are frequently shown as due to bowel-complaint (*Potátil rog*).

59. The Deputy Sanitary Commissioner, Central Registration District, is of opinion that the heavy mortality was due to two causes: (1) the reduced condition of a large part of the population owing to the famine and the use of improper food; (2) the flushing out of nálas by rain after the prolonged drought and the consequent impurity of the water-supply in many places.

60. The Deputy Sanitary Commissioner, Southern Registration District, remarks: "No fresh light has been thrown on the causes of this disease in affected localities."

61. The Deputy Sanitary Commissioner, Gujarát Registration District, writes: "It is impossible to trace the origin of the outbreak. Imported no doubt it was, but from whence and by what agency it was impossible to ascertain."

61(*a*). "In combatting the disease permanganate of potassium was largely used, and, as far as I could judge, with good effect; but the effect was temporary. The tide of disease ebbed, flowed and almost disappeared, but revived and burst out afresh."

61(*b*). "There was no doubt re-infection, and at the same time careless or faulty use of the permanganate may account for this."

61(*c*). "However, it seems not improbable that widespread re-infection of wells took place through the clouds of dust which arose regularly every day throughout the month of May. This dust would carry with it the desiccated dejecta of cholera with which the ground around infected camps soon became polluted, and it followed such infected dust particles into the open wells."

62. The Deputy Sanitary Commissioner, Sind Registration District, reports that an isolated case occurred in each of the Cantonment and Town Circles of Karáchi on the 7th and 13th May 1900. It is possible, he says, that the outbreak may have originated in the locality itself, as the area affected had been visited by cholera during the previous year when a very heavy incidence of the disease occurred.

62(*a*). The second outbreak commenced in the Umarkot Táluka, and there is evidence to indicate that the disease was imported from Jodhpur. In Umarkot town there is reason to believe that certain of the drinking water-supplies became polluted and (until repressive measures were taken in hand) the disease spread among the people using the infected water. Later, the disease spread by personal communication to the Bhaite Bund, situated 16 miles south of Umarkot. On this bund some thousands of people were engaged on construction work. The disease spread among these people with great rapidity, and the panic occurred among the workers, who fled in all directions, carrying the disease with them.

62(*b*). From this source the Thar and Párkar District, the Hyderabad District and the northern parts of the Province became gradually infected. The villages in all these areas are not situated unduly closely to each other, but there was a considerable amount of personal intercommunication between the villages.

Small-pox.

Small-pox mortality.

63. There were 9,885 deaths from small-pox (5,198 males and 4,687 females) against 1,946 in 1899 and a decennial mean of 3,024.

Small-pox deaths since 1889.

64. The number of deaths registered under this head since 1889 is as follows:—

Years.	Number of deaths.	Years.	Number of deaths.
1889	7,066	1895... ...	2,229
1890	2,877	1896... ...	6,443
1891	1,491	1897... ...	3,835
1892	2,770	1898... ...	1,834
1893	3,567	1899... ...	1,946
1894	3,155	1900... ...	9,885
	20,926		26,172

Deaths by districts and collectorates.

65. The mortality from small-pox is the highest recorded for the past ten years. No district has been free, though some districts have been visited lightly. The Western Registration District shows the highest mortality, 64·35 per cent. of the total deaths, and of the deaths in the district the largest number occurred in the City of Bombay in the early part of the year. Both in the city and in the districts adjacent the outbreak was much increased by the large influx of strangers. In the city fortunately open airy sheds for calves in a fair situation are in temporary use, thus the calves were enabled to be kept healthy, and by great exertions on the part of the Superintendent of Vaccination and his staff a very large number of vaccinations and re-vaccinations (over 34,800 in three months) were performed, as the chief outbreak was in the first quarter of the year. It is high time suitable provision was made for the proper housing of the office and animals of the Vaccination Department in Bombay. If they had been in their old quarters in the town the consequences might have been disastrous.

66. As regards the deaths from small-pox in the Southern Registration District, the Deputy Sanitary Commissioner, Southern Registration District, remarks that "small-pox caused 752 deaths in the whole circle as against 439 last year, which was largely due to difficulties of vaccination work in affected plague localities"; and as regards the deaths from small-pox in Gujarát, the Deputy Sanitary Commissioner, Gujarát Registration District, states that "considering the enormous influx of people from surrounding States during the famine, the number of deaths from small-pox is not large and testifies to the good work done by Vaccination staff."

Deaths by ages.

67. In the year under report 28·86 per cent. of deaths occurred amongst infants under 1 year of age, whilst 41·20 per cent. took place among children 1 to 10 years, the remaining 29·94 being among persons over 10 years of age.

Fever.

Fever mortality.

68. There were 543,319 deaths registered under the heading "Fever", excluing Plague (288,145 males and 255,174 females), against 228,438 in 1899, thus there was an increase of 314,870 deaths as compared with the previous year; the decennial mean is 382,332, which includes the deaths from plague for the past four years.

Fever deaths since 1889.

69. The number of deaths registered from fever is the highest for the past ten years.

Deaths by districts and collectorates.

70. In the following table the deaths are shown by districts and collectorates:—

Districts.	No.	Collectorates.	Population according to Census of 1891.	Deaths from Fever. Mean for 10 years from 1890 to 1899.	Ratio per 1,000 of population.	1899.	Ratio per 1,000 of population.	1900.	Ratio per 1,000 of population.
Western Registration District.	1	Khándesh	1,460,319	34,967	24·32	22,111	15·14	59,818	40·62
	2	Násik	841,087	20,664	24·74	12,204	14·51	21,747	25·86
	3	Thána	818,967	16,706	20·43	15,883	19·39	21,898	26·74
	4	City of Bombay ...	806,144	11,839	14·75	5,020	6·23	7,900	9·80
	5	Kolába	594,779	10,443	17·89	9,631	16·19	11,791	19·83
Central Registration District.	6	Ahmednagar ...	887,656	17,584	20·12	5,297	5·97	14,999	16·90
	7	Poona	1,061,449	23,962	22·92	18,020	16·98	18,015	16·97
	8	Sholápur	750,255	16,089	21·93	10,911	14·54	12,925	17·23
	9	Sátára	1,225,511	27,060	22·38	6,338	5 17	9,203	7·51
	10	Ratnágiri	1,105,862	13,863	12·66	11,325	10·24	18,805	17·00
Southern Registration District.	11	Belgaum	1,011,453	15,516	15·57	2,818	2·79	4,697	4·64
	12	Dharwár	1,050,533	20,420	19·75	8,662	8·25	8,694	8·28
	13	Bijápur	796,286	12,820	16·43	2,823	3·55	6,103	7·66
	14	Kánara	446,156	7,244	16·33	6,220	13·94	5,890	13·20
Gujarát Registration District.	15	Surat	649,824	15,901	24·60	11,636	17·91	26,036	40·07
	16	Broach	341,450	10,863	31·94	8,391	24·57	30,613	89·66
	17	Kaira	871,529	22,004	25·44	5,243	6·02	41,759	47·91
	18	Panch Mahála ...	313,381	7,156	23·26	6,719	21·44	52,575	167·77
	19	Ahmedabad... ...	920,928	26,023	28·46	20,035	21·75	102,476	111·27
Sind Registration District.	20	Karáchi	561,013	10,393	18·80	6,603	11·77	11,911	21·23
	21	Hyderabad	883,836	12,757	14·65	9,079	10·27	17,962	20·32
	22	Thar and Párkar ...	332,401	5,403	16·91	7,449	22·41	19,640	59·09
	23	Shikárpur	915,058	19,502	21·46	13,237	14·47	14,403	15·74
	24	Upper Sind Frontier.	174,469	3,153	18·61	2,783	15·95	3,959	22·69

Abstract.

Western Registration District	4,521,296	94,619	21·13	64,849	14·34	122,654	27·13
Central do.	5,030,733	98,558	19·88	51,891	10·31	73,947	14·70
Southern do.	3,304,428	56,000	17·21	20,523	6·21	25,384	7·68
Gujarát do.	3,097,112	81,947	26·66	52,024	16·80	253,459	81·84
Sind do.	2,866,777	51,208	18·15	39,151	13·66	67,875	23·68
Presidency ...	18,820,346	382,332	20·57	228,438	12·14	543,319	28·87

N.B.—The mean for 10 years includes the deaths from plague.

The death-rate under the heading "Fever" was 28·87 per mille as compared with 12·14 for the previous year and a decennial mean of 20·57, and this includes the deaths from plague during the years from 1896 to 1899. In the Gujarát Registration Districts the death-rate was very high. In the collectorates of Poona, Dhárwár and Kánara the ratio was nearly the same as that for 1899. The collectorate of Panch Mahála heads the list with a very high ratio, 167·77 per mille, against 21·44 in 1899 and 23·26 in the previous ten-year mean. In the Collectorates of Ahmedabad, Broach, Thar and Párkar, Kaira, Khándesh and Surat high ratios are observed. This result is due to famine causes to a great extent.

71. As regards the enormous increase in the number of deaths from fever in each collectorate in Gujarát, the Deputy Sanitary Commissioner, Gujarát Registration District, remarks that "$\frac{3}{5}$ of the total number were returned from Ahmedabad and Panch Mahála Districts. The returns from these two districts show serious defects in registration, and fever as a cause of death is much too commonly entered. The highest recorded number of deaths from fever in any month was in May, which is a very unusual occurrence, and may be partly accounted for by the fact that in this month also the cholera epidemic reached its greatest virulence and many deaths from cholera were entered under the heading of "Fever".

71 (*a*) "Still a form of fever was unusually prevalent early in the year and continued throughout the hot weather. A careful watch was kept for symptoms pointing to relapsing fever, but no cases were observed, and during the hot weather a careful investigation conducted by Captain Lamb, I. M. S., in Broach, Kaira, Panch Mahâls and by myself in Ahmedabad District produced no evidence of this disease.

71 (*b*). "It was not confined to famine workers or the poorer classes. The better classes suffered considerably in Ahmedabad City.

71 (*c*). "This type of fever continued up to the fall of the rains and was quickly followed by the usual type of malarial fever, which became quite an epidemic among a people reduced in condition by a year's famine.

71 (*d*). "The rain was scanty and ceased early and malarial season attained full vigor in August and September, fully a month before the usual time."

72. As to the increased number of deaths from fever over that for 1899 in Sind, the Deputy Sanitary Commissioner, Sind Registration District, remarks that "the severity of the incidence was most marked in the Thar and Párkar District. The increase is attributed to the large number of famine refugees in this district, their bad state of health, and the altered conditions under which they were living."

Deaths by months.

73. The number of deaths in each month during the year was higher than in the corresponding months of the previous years. In February the lowest mortality was reported and in March, April and May a rise took place, but in June there was a fall and in July a rise again took place which reached its maximum in August. In September there was a fall and continued till the end of the year.

Remarks on the Rainfall of 1900.

74. *January and February.*—There was no rain.

March.—Beyond light scattered showers in the Collectorates of Ratnágiri and Bijápur and Southern Deccan there was no rain.

April.—Heavy showers fell in the Karnátak and in parts of the Deccan, and light ones in Gujarát.

May.—Almost throughout the Karnátak rain fell in moderate showers, the total fall was heavier in the Dhárwár Collectorate and elsewhere below average.

June.—The rainy season commenced on the 9th in the Kánara and Ratnágiri Districts, but being weak and irregular gave very light showers in the ghát tálukas and could not advance to Khándesh and the Gujarát Districts.

In the Deccan the month's rain exceeded the average in the Ahmednagar and Sholápur and in the eastern tálukas of Poona and Sátára. Elsewhere it was far short of the normal fall.

Karnátak.—The rainfall during the month was generally up to or above the average.

Konkan.—The month's rainfall was below the average except in Kánara and Ratnágiri, where it was above.

Gujarát.—With the exception of some light showers in Surat and Panch Mahâls the whole month was dry.

July.—In the Deccan the month's fall was slightly below the average in Khándesh and Násik, but in most tálukas of the other districts it exceeded the usual fall of the month.

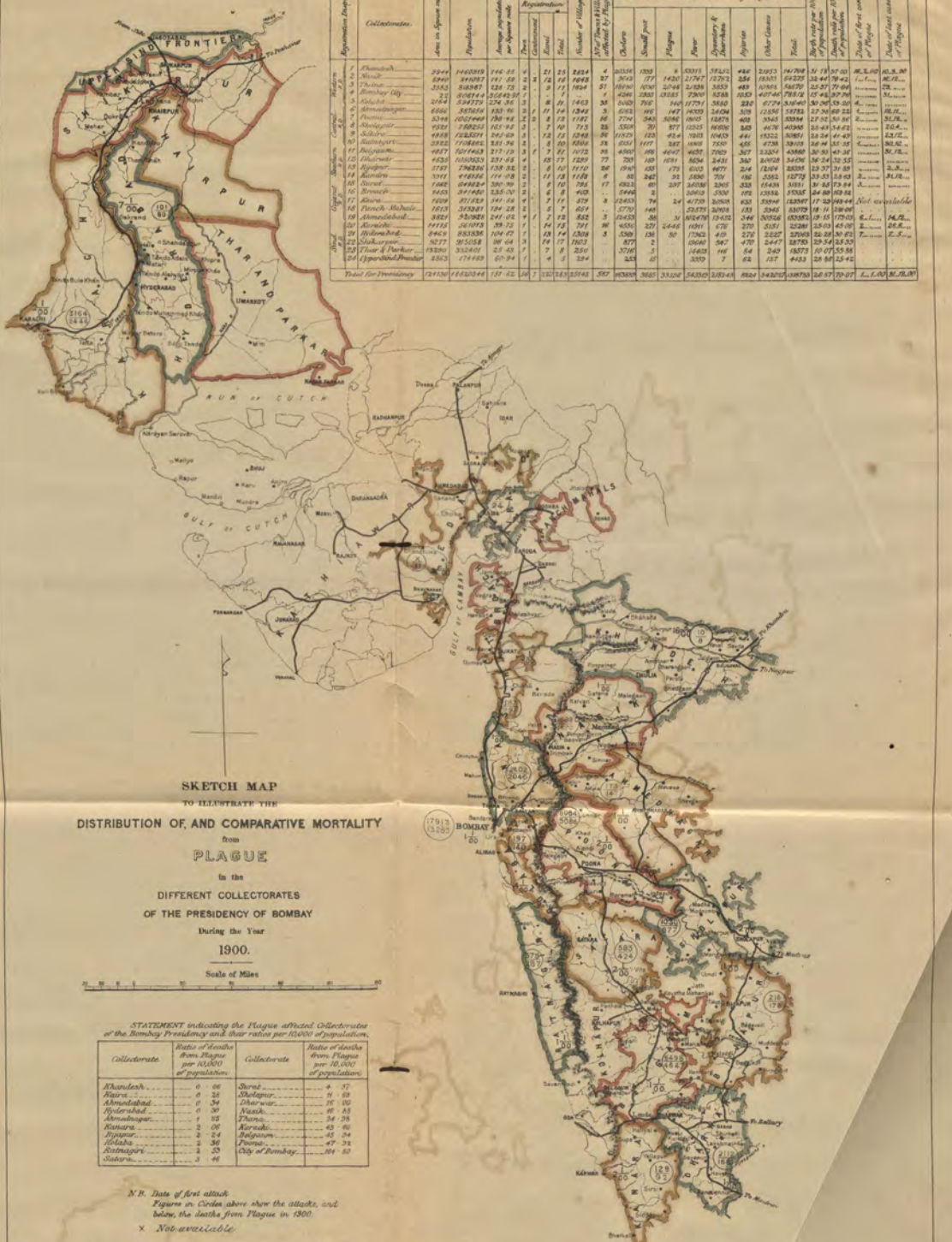
Karnátak.—The rainfall was above the average in Belgaum and Bijápur, but in Dhárwár it was below.

Konkan and Gujarát.—The total rainfall during the month was everywhere much below the average expect in Kánara and the southern tálukas of Surat.

At the end of July the monsoon conditions set in again.

STATEMENT SHEWING VITAL STATISTICS &c. IN EACH COLLECTORATE DURING 1900.

Representative Districts	Collectorates.	Area in Square miles	Population	Average population on Square mile	Circles of Registration: Towns	Circles of Registration: Cantonments	Circles of Registration: Rural	Circles of Registration: Total	Number of Towns & Villages affected by Plague	Number of deaths recorded during the year from: Cholera	Small pox	Plague	Fever	Dysentery & Diarrhoea	Injuries	Other Causes	Total	Birth rate per 1000 of population	Death rate per 1000 of population	Date of first case of Plague	Date of last case of Plague
Gujarat Northern Central Southern	1 Khandesh	10944	1463819	134·35	4	21	25	2634	4	20356	1358	9	53315	38242	486	21953	141708	31·18	97·03	30. 3. 00	10. 5. 00
	2 Nasik	5940	1410817	191·59	2	2	14	1678	37	3650	139	1420	21747	12293	324	15301	54225	32·44	78·42	1. 1. ..	31. 12. ..
	3 Thana	3383	518987	128·73	2	.	9	1624	51	19190	1030	2046	21328	3859	483	10165	59670	25·57	77·64	.....	28. .....
	4 Bombay City	22	806744	36642·91	1	.	1	1	1	4246	2333	13185	7300	5288	1053	40746	73512	15·48	27·78	.....	31. .....
	5 Kolaba	2744	534775	274·36	3	6	11	1463	38	5402	796	1469	17791	5550	229	6774	38040	30·96	59·30	6.	.....
	6 Ahmednagar	6666	887856	133·16	2	11	14	1345	3	6182	116	147	14359	2404	378	12656	35782	27·36	69·22	4.	18. 11. ..
	7 Poona	5348	1027449	192·14	2	8	13	1187	16	7774	343	5046	18015	12873	402	3845	53994	27·52	50·56	2.	31. 12. ..
	8 Sholapur	4251	758255	101·94	3	7	10	713	22	5309	70	577	12355	19030	243	4676	42360	24·43	54·63	.....	28. 4. ..
	9 Satara	4955	1225311	247·69	3	12	13	1348	56	11575	123	424	7013	10453	441	13322	50851	23·24	41·49	.....	23. 12. ..
	10 Sangli	2352	710485	301·96	2	8	10	1006	33	6051	1117	387	6918	7550	455	4738	31115	26·14	35·35	4.	30. 12. ..
	11 Belgaum	4817	1019463	211·59	3	7	11	1973	99	4980	198	4047	9635	7980	367	13354	45880	30·50	49·36	.....	31. 12. ..
	12 Dharwar	4634	1016923	231·68	4	18	17	1289	77	2215	169	1091	5634	2431	362	24928	34630	34·24	33·55	.....	.....
	13 Kaladgi	5737	1262356	138·32	2	8	10	1110	28	1940	453	173	6103	9677	214	12164	28335	23·37	31·39	.....	2. 3. ..
	14 Kanara	3911	476856	114·08	2	11	13	1189	6	83	242	93	5896	701	186	5382	12773	33·33	26·63	2.	31. 12. ..
	15 Surat	1962	494824	280·90	2	8	10	783	17	6923	60	207	26038	3205	338	15438	51811	31·32	73·64	3.	.....
	16 Broach	1453	341450	235·00	2	6	8	903	..	5446	2	..	30913	5330	192	13332	57035	24·80	109·16	.....	.....
	17 Kaira	1609	511523	341·16	4	7	11	879	3	12453	74	24	41759	30908	633	33948	123977	17·39	48·46	Not available	
	18 Panch Mahals	1515	313281	194·28	2	5	7	804	..	5739	144	..	23575	20908	183	3946	55070	18·11	38·06	.....	.....
	19 Ahmedabad	3821	930825	241·02	4	7	12	852	3	12433	86	31	102478	13432	344	20526	153852	19·15	179·03	6. 1. ..	14. 12. ..
	20 Kaira	14115	561013	39·73	1	14	15	791	16	4551	257	2446	11311	678	270	5151	22281	25·03	45·08	2.	26. 12. ..
	21 Ahmedabad	8463	883536	104·43	1	13	14	1308	3	5369	138	30	17963	419	279	2227	27005	22·29	30·83	7.	2. 1. ..
	22 Sabarkantha	5277	915058	98·64	3	14	17	1103	..	877	2	..	19080	587	470	2447	28783	29·54	35·59	.....	.....
	23 Thar & Parkar	15290	352401	23·43	1	7	8	250	..	3796	3	..	14403	116	64	243	18573	10·07	35·86	.....	.....
	24 Upper Sind Frontier	6363	174483	60·94	1	4	5	394	..	253	61	..	3393	7	62	187	4433	28·80	25·42	.....	.....
	Total for Presidency	124130	18480348	157·62	56	232	285	25145	587	163859	9685	33102	543360	283459	8826	342207	1384758	28·87	70·07	1. 1. 00	31. 12. 00



STATEMENT indicating the Plague affected Collectorates of the Bombay Presidency and their ratios per 10,000 of population.

Collectorate.	Ratio of deaths from Plague per 10,000 of population.	Collectorate	Ratio of deaths from Plague per 10,000 of population.
Khandesh	0 · 06	Surat	4 · 37
Nasik	0 · 28	Sholapur	11 · 69
Ahmedabad	0 · 34	Dharwar	15 · 00
Hyderabad	0 · 39	Nasik	16 · 85
Ahmednagar	1 · 93	Thana	34 · 36
Kanara	2 · 06	Karachi	43 · 60
Kaira	2 · 24	Belgaum	45 · 34
Kolaba	2 · 36	Poona	47 · 32
Ratnagiri	2 · 53	City of Bombay	164 · 80
Satara	3 · 46		

N.B. Date of first attack
Figures in Circles above show the attacks, and below, the deaths from Plague in 1900.
× Not available.

Sanitary Commissioner's Report 1900 Bombay

Govt Photozincgr. Office, Poona, 1901.

August.—In the Deccan the month's rain exceeded the average, it fell almost daily with short intervening breaks towards the close of the month, but in the eastern tálukas it was below the average and very little rain fell after the 17th of the month, and the prolonged breaks in the second fortnight proved injurious to the crops.

Karnátak.—In Belgaum and in the western portion of Dhárwár the month's fall was more than the average. In the eastern tálukas of Dhárwár and the whole of Bijápur the rainfall was light and deficient.

Konkan and Gujarát.—The rainfall was in excess of the average in all districts.

September.—In the Deccan and Karnátak the month's rainfall was much below the average, but in the Konkan it generally exceeded it.

In Gujarát the rainfall exceeded the average in Broach, Panch Maháls and in the eastern tálukas of Surat and Kaira, and elsewhere below.

October.—In the Deccan rain fell in light to fair showers in Southern Deccan and Ahmednagar, and none elsewhere.

Karnátak.—The rainfall was below the average.

Konkan.—Light and fairly heavy showers fell in Kánara and practically no rain elsewhere.

Gujarát.—No rain.

November and December.—Beyond some light showers in Sholápur and Sátára in November, there was no rain. The temperature during the year was above the average, and in Gujarát in May and June a hot strong wind blew driving up clouds of dust.

PLAGUE.

75. A map showing the districts and the date of the first case reported is appended and also a list showing the attacks and deaths from the disease for the year 1900.

76. The following table shows the deaths from plague arranged by districts and collectorates :—

District.	No.	Collectorates.	Population according to Census of 1891.	Deaths from Plague.							
				1896.	1897.	Ratio per 1,000 of Population.	1898.	Ratio per 1,000 of Population.	1899.	Ratio per 1,000 of Population.	1900.	Ratio per 1,000 of Population.
Western Registration District.	1	Khándesh	1,460,319	5	76	0·05	230	0·05	620	0·42	8	...
	2	Násik	841,087	...	1,075	1·28	1,951	2·32	8,441	10·03	1,430	1·69
	3	Thána	818,967	95	4,156	5·07	3,235	3·97	4,362	5·33	2,043	2·50
	4	Bombay	806,144	1,803	10,237	12·70	18,130	22·49	15,874	19·69	13,245	16·48
	5	Kolába	594,776	13	1,309	2·20	654	1·10	902	1·52	141	0·24
Central Registration District.	6	Ahmednagar ...	887,656	4	386	0·43	333	0·38	2,681	3·02	147	0·16
	7	Poona	1,061,449	39	8,871	8·36	1,355	1·28	19,047	17·94	5,086	4·80
	8	Sholápur	750,255	1	2,353	3·14	1,557	2·08	1,767	2·36	877	1·16
	9	Sátára	1,225,511	...	10,031	8·18	6,918	5·64	8,740	7·13	424	0·35
	10	Ratnágiri	1,105,862	...	26	0·02	374	0·33	642	0·58	287	0·26
Southern Registration District.	11	Belgaum	1,011,453	...	444	0·44	16,301	16·12	12,772	12·63	4,647	4·60
	12	Dhárwár	1,050,533	...	33	0·04	27,764	26·43	9,183	8·74	1,681	1·60
	13	Bijápur	796,286	...	3	...	979	1·23	3,074	3·86	178	0·22
	14	Kánara	446,156	...	...	...	59	0·13	431	0·97	92	0·20
Gujarát Registration District.	15	Surat	649,824	21	3,070	4·72	2,552	3·92	1,606	2·47	297	0·48
	16	Broach	341,450	5	9	0·03	424	1·24	902	2·64	...	...
	17	Kaira	871,529	10	3	...	445	0·51	1,516	1·74	24	0·03
	18	Panch Maháls ...	313,391	..	...	...	201	0·64	700	2·23	...	...
	19	Ahmedabad ...	920,928	29	65	0·08	6	...	51	0·05	31	0·03
Sind Registration District.	20	Karáchi	561,013	59	3,572	6·37	2,723	4·85	2,359	4·20	2,446	4·36
	21	Hyderabad	883,836	1	499	0·57	1	...	922	1·04	80	0·09
	22	Thar and Párkar ...	332,401	...	2	...	...	...	...	...	...	...
	23	Shikárpur	915,058	1	716	0·78	...	...	3	...	...	...
	24	Upper Sind Frontier.	174,469	...	3	0·02	...	...	1	...	...	...

Abstract.

Western Registration District			4,521,296	1,916	16,853	3·73	24,200	5·35	30,199	6·68	16,899	3·74
Central do.			5,030,732	44	21,667	4·31	10,537	2·09	32,877	6·53	6,821	1·35
Southern do.			3,304,428	...	485	0·15	45,113	13·65	25,490	7·70	6,598	2·00
Gujarát do.			3,097,112	65	3,147	1·02	3,628	1·17	4,775	1·54	352	0·11
Sind do.			2,866,777	61	4,792	1·67	2,723	0·95	3,285	1·15	2,526	0·88
		Total ...	18,820,346	2,086	43,944	2·49	86,191	4·58	96,596	5·13	33,196	1·76

At the end of 1896 there had been a total of 2,909 attacks and 2,086 deaths from plague, 61,093 attacks and 46,944 deaths were recorded during 1897, 110,369 attacks and 86,191 deaths during 1898, 126,287 attacks and 96,596 deaths during 1899 and 43,064 attacks and 33,196 deaths in 1900. The incidence of this disease has been very much less in the year under review than in the two previous years. In every circle, except Karáchi, the attacks and deaths have been very much lower than in the previous year. Whether this is due to the waning of the disease, the less severe measures, inoculation, non-registration of plague deaths or the numbers of those liable to plague having been reduced from other causes such as famine, remains to be seen. The table below gives the progress of the disease by months in each collectorate for the year under report.

The epidemic continued throughout the year and was at its lowest intensity in July and reached its maximum in October. Five districts, Broach, Panch Maháls, Thar and Párkar, Shikárpur and Jacobabad remained uninfected throughout the year.

No.	District.	January.		February.		March.		April.		May.		June.		July.	
		Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.
1	Khándesh	1	1	7	3	...	2	...	...	...	...	...	...	...	...
2	Násik	37	26	69	56	42	35	2	2	1	...	...	...	...	...
3	Thána	171	142	230	181	356	309	471	397	265	243	46	34	38	32
4	City of Bombay...	2,455	1,718	3,023	2,401	4,067	3,125	3,092	2,367	1,511	1,141	603	421	405	268
5	Kolába	52	45	15	11	20	13	15	14	27	23	3	4	...	...
6	Ahmednagar ...	44	43	34	30	41	31	37	31	...	...	...	...	...	...
7	Poona	120	109	42	34	54	49	13	12	1	1	...	...	3	3
8	Sholápur... ...	615	566	293	208	120	101	2	2	...	...	...	...	...	...
9	Sátára	186	144	107	91	83	70	30	32	12	8	...	...	...	...
10	Ratnágiri ...	92	56	86	45	106	106	69	62	14	12	5	3	...	...
11	Belgaum... ...	284	225	180	149	142	101	77	67	32	18	15	7	42	32
12	Dhárwár... ...	429	375	247	210	186	166	40	35	...	...	1	1	...	...
13	Bijápur	159	128	56	48	1	2	...	...	...	...	...	...	...	...
14	Kánara	4	2	...	...	4	...	2	1	1	...	2	3	8	3
15	Surat	64	51	27	23	37	26	17	12	6	4	1	1	23	13
16	Broach..... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17	Kaira	†	5	†	3	†	7	†	3	†	6	..	...	...	...
18	Panch Maháls ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	Ahmedabad ...	...	...	...	...	...	...	...	...	†	14	†	14	†	1
20	Karáchi	68	57	81	64	640	451	1,807	1,436	533	405	35	33	...	...
21	Hyderabad ...	3	2	25	12	55	46	17	18	1	2	...	...	...	...
22	Thar and Párkar	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	Shikárpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	Jacobabad ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total for the Presidency.	4,774	3,695	4,522	3,659	5,960	4,631	5,691	4,491	2,404	1,877	711	521	519	352

No.	District.	August.		September.		October.		November.		December.		Total.		Number of Towns and Villages affected by Plague.
		Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	Attacks.	Deaths.	
1	Khándesh	...	...	1	1	1	1	...	...	...	...	10	8	4
2	Násik	52	30	450	373	856	756	168	131	11	11	1,688	1,420	27
3	Thána	163	123	290	249	197	173	76	76	99	96	2,402	2,046	51
4	City of Bombay...	383	270	626	357	638	380	451	283	659	454	17,913	13,285	1
5	Kolába	...	...	21	5	20	10	...	...	24	15	197	140	35
6	Ahmednagar ...	1	1	6	6	8	4	2	1	...	...	173	147	9
7	Poona	206	150	1,539	1,273	2,881	2,353	928	836	299	266	6,086	5,006	86
8	Sholápur... ...	...	...	...	...	...	...	...	...	...	...	1,030	877	22
9	Sátára	...	...	7	5	25	15	49	23	84	36	583	424	56
10	Ratnágiri ...	...	...	...	...	3	3	...	...	...	...	375	287	52
11	Belgaum... ...	284	203	1,556	1,114	1,829	1,205	1,295	964	756	562	6,498	4,647	93
12	Dhárwár... ...	1	1	300	188	477	380	242	190	189	135	2,112	1,681	77
13	Bijápur	...	...	...	...	...	...	...	...	...	...	216	178	26
14	Kánara	14	9	28	25	33	26	28	18	5	5	149	92	6
15	Surat	53	36	68	55	45	39	28	21	29	16	387	297	17
16	Broach	...	...	...	...	...	...	...	...	...	...	...	...	...
17	Kaira	...	...	...	...	...	...	...	...	...	...	†	24	3
18	Panch Maháls ...	...	...	...	...	...	...	...	...	...	...	...	...	...
19	Ahmedabad ...	†	1	...	...	...	...	†	1	...	...	†	31	3
20	Karáchi	...	...	...	...	...	...	...	...	...	...	3,164	2,446	16
21	Hyderabad ...	...	...	...	...	...	...	...	...	...	...	101	80	3
22	Thar and Párkar	...	...	...	...	...	...	...	...	...	...	...	...	...
23	Shikárpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...
24	Jacobabad ...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total for the Presidency.	1,156	824	4,892	3,651	7,013	5,345	3,267	2,544	2,155	1,606	43,064	33,196	587

† Not available.

76. *Khándesh.*—This district was very lightly affected. There were 10 attacks and 8 deaths in four villages.

77. *Násik.*—The plague prevailed in a mild form up to May, when it ceased, the greatest mortality (56) being in February. It reappeared in August with 30 deaths and rapidly increased with 373 deaths in September and 756 in October; after this it declined just as rapidly and the year closed with 11 deaths in December. In all there were 27 towns and villages affected and 1,688 attacks and 1,420 deaths.

78. *Thána.*—Was affected during the whole year as in 1899. In January there were 142 deaths from plague and the disease gradually increased until April, when the maximum number of deaths, 397, took place, and then gradually declined until July, when 32 deaths took place; it then again increased during the months of August and September, when 249 deaths were recorded in the latter month and again gradually declined, and the year closed with 96 deaths in December. There were 51 towns and villages affected with plague, recording 2,402 attacks and 2,046 deaths.

79. *Bombay City.*—As in 1899 the disease was prevalent throughout the year. The maximum deaths, 3,125, were reached in March, when it rapidly fell until July, giving 268 deaths, the minimum, and then again there was a gradual rise and continued so until the close of the year, when 464 deaths were recorded. The total for the year was 17,913 attacks and 13,285 deaths.

80. *Kolába.*—There was plague in a mild form in Kolába for nine months. The highest mortality, 45, took place in January. In all there were 35 towns and villages affected and 197 attacks and 140 deaths.

81.—*Ahmednagar.*—In January there were 43 deaths, and decreased gradually till April, when it ceased. The district was practically free until the end of the year. The totals for the year were 9 towns and villages, with 173 attacks and 147 deaths.

82. *Poona.*—In the Poona Collectorate plague occurred in all the tálukas except Junnar. In January there were 109 deaths, after which they fell rapidly until in May, and the collectorate was free in June. There were a few cases in July. In August there was a large and sudden increase in the mortality and continued to increase till October, when 2,353 deaths, the maximum, were recorded; 86 towns and villages were affected and there were 6,086 attacks and 5,086 deaths reported.

83. *Sholápur.*—The disease was on the increase during the latter part of 1899 and recorded the maximum deaths, 695, in December, but in January there was a fall, which continued until April, when only 2 deaths were recorded; and the district remained free till the close of the year. The totals for the year were 22 towns and villages, 1,030 attacks and 877 deaths.

84. *Sátára.*—In January there were 144 deaths, after which they fell rapidly until in May, when 8 deaths were recorded, and the collectorate was free up to the end of August. The disease reappeared in September and continued to the end of the year with a few deaths each month. In the whole collectorate 56 towns and villages were affected and there were 583 attacks and 424 deaths.

85. *Ratnágiri.*—In the first-half of the year plague prevailed to a limited extent, while the latter half, with the exception of 3 deaths in October, was free. The highest mortality (106) was in March. There were 52 towns and villages affected and 375 attacks and 287 deaths occurred.

86. *Belgaum.*—As in 1899 the disease was prevalent during the entire year. In 1900 the minimum deaths took place in June, but from that month it began to increase till October, when the maximum (1,205) was recorded. Ninety-three towns and villages were affected and there were 6,498 attacks and 4,647 deaths reported.

87. *Dhárwár.*—Was affected during the whole year except in the months of May and July. The year opened with 375 deaths in January, and the disease gradually declined till April, when the minimum 35 deaths were recorded; it

again increased rapidly when the maximum 380 deaths were reached in October, 77 towns and villages were affected and there were 2,112 attacks and 1,681 deaths reported.

88. *Bijápur.*—In January there were 128 deaths, after which they fell rapidly until in March, when 2 deaths were recorded, and the collectorate was free till the close of the year. The total for the year was 26 towns and villages, 216 attacks and 178 deaths.

89. *Kánara.*—With the exception of February, plague was present in a mild form throughout the year. There were 6 towns and villages affected and there were 129 attacks and 92 deaths.

90. *Surat.*—In this collectorate the plague was present in every month of the year. Amongst town circles the highest number of deaths, 128, was recorded in the town of Bulsár. In all there were 17 towns and villages affected and 357 attacks and 297 deaths.

91. *Broach.*—There was no plague in this collectorate.

92. *Kaira.*—This district was very lightly affected. There were 24 deaths in 3 towns and villages.

93. *Panch Mahals.*—There was no plague in this collectorate.

94. *Ahmedabad.*—In this collectorate, Dáskroi Registration Circle returned 9 deaths, while 22 deaths were reported from Ahmedabad Town Circle.

95. *Karáchi.*—The increase which took place towards the close of 1899 continued in January with 57 deaths and 64 in February, when it rapidly increased, recording the maximum mortality 1,436 in April and declined just as rapidly as it increased. The disease ceased in June and the district was free till the close of the year. Karáchi Town Circle suffered the most during the year. In the whole collectorate 16 towns and villages were affected and there were 3,164 attacks and 2,416 deaths reported.

96. *Hyderabad.*—In the first-half of the year there were a few deaths from plague, but the latter half was free. There were 3 towns and villages affected and 101 attacks and 80 deaths reported.

97. In the whole Presidency there were 43,064 attacks and 33,196 deaths from plague and 587 towns and villages were affected as compared with 126,287 attacks and 96,596 deaths and 2,256 affected towns and villages in 1899.

98. The parts most affected were City of Bombay, the Collectorates of Poona and Belgaum, and the rates of plague deaths per mille in them were 16·48, 4·80 and 4·60 respectively. Karáchi came next with a rate of 4·36 and then Thána, Násik, Dhárwár and Sholápur with rates which ranged from 2·50, 1·69, 1·60 and 1·16 respectively; the rates of the remaining affected collectorates were much lower. The rate per mille for the various Registration Districts were as follows:—

Western 3·74, Central 1·35, Southern 2·00, Gujarát ·11 and Sind ·88.

In January there were 3,695 deaths and during March they rose to 4,631. In April the deaths fell and continued to fall until the minimum (352) was reached in July; they rose again in August, and a more distinct rise took place in October, when the maximum 5,345 was recorded, after which they continued falling until December.

Dysentery and Diarrhœa.

Deaths from dysentery and diarrhœa.

99. Dysentery and diarrhœa caused the deaths of 119,877 males and 98,366 females, or a total of 218,243 persons, against 74,736 in 1899 and a decennial mean of 46,568, an increase of 143,507 against the last year and 171,675 over the decennial mean.

Deaths since 1889.

100. The number of deaths ascribed to dysentery and diarrhœa in each year since 1889 is as follows:—

Year.	Number of deaths from Dysentery and Diarrhœa.	Year.	Number of deaths from Dysentery and Diarrhœa.
1889	48,202	1895	35,218
1890	36,037	1896	36,046
1891	37,728	1897	85,908
1892	35,406	1898	56,789
1893	32,965	1899	74,783
1894	34,667	1900	218,243
Total ...	225,005	Total ...	507,128
Mean ...	37,501	Mean ...	84,521

The deaths ascribed to dysentery and diarrhœa during the eight years preceding 1897 showed only slight variations, but have since 1897 shown a great increase. In the famine year of 1897 there was a sudden increase, which is but natural in a year of scarcity, and has been repeated to an even greater extent in the present year.

101. The Deputy Sanitary Commissioner, Gujarát Registration District, remarks that "these diseases prevailed from the beginning of the year and only sensibly declined during the last two months. They were most prevalent during and just after the rains, when damp and chills were added to the chief cause—unsuitable food."

101(*a*). "The consumption of badly cooked, half-cooked or raw grain, wild seeds, leaves, bark of trees, roots, &c., in fact of almost anything solid which would help to fill the void; these are the chief causes of what was really an epidemic of dysentery and diarrhœa."

101(*b*). "The famine has brought to light many new kinds of grain as food, chief among which are the endless varieties of grass seeds."

101(*c*). "At first there were two chief varieties, Samo and Ankhi-Manki, the former being obtained only from Bir land or regular grass land, while the latter is ubiquitous. Later any patch of grass was shaved close to the ground and the ground carefully swept, and the miscellaneous collection of seeds ground to a meal and eaten as cakes."

101(*d*). "It is astonishing how many hundreds of people have been able to keep body and soul together on a diet of grass seed cakes, yet considering the proportion of indigestible and irritating husk to nutrient material in the tiny seeds, a purely grass seed diet must at any rate at first have had very deleterious effect."

101(*e*). "The consumption is so large now that the collection of grass grain has almost become an industry."

102. The table in the margin shows the monthly distribution of deaths ascribed to these causes as compared with the mean and with the corresponding months of 1899. Every month of the year, except December, shows an increase over the figures of the last year. The increase over the decennial mean also took place in each month of the year. There is an almost unbroken rise from January to August, and the heavy increase in July and August is due to the effects of the rain on weakly bodies.

Deaths by months.

Months.	Mean for ten years from 1891—1900.	1899.	1900.
January	3,201	5,729	10,546
February ...	2,952	4,656	12,611
March	2,859	5,173	18,726
April	3,028	6,280	21,212
May	3,110	6,510	24,091
June	3,351	6,699	19,991
July	4,825	7,612	30,251
August	5,287	7,781	31,439
September ...	5,577	7,105	22,161
October	4,781	6,736	13,116
November ...	4,018	6,102	7,753
December ...	4,335	7,243	6,254
Total ...	46,568	74,736	218,243

Injuries.

Deaths from injuries.

103. During 1900, 4,740 males and 3,484 females, or a total of 8,224 persons, met with violent deaths. The mortality from these causes is more by 1,112 than that reported in 1899.

Deaths from injuries in 1899 and 1900 arranged by sexes.

104. The deaths from these causes for the last two years, arranged by sexes, are shown in the following table:—

	1899.			1900.		
	Male.	Female.	Total.	Male.	Female.	Total.
Drowning	1,279	1,493	2,772	1,685	1,952	3,637
Poisoning	67	42	109	77	30	107
Hanging	106	51	157	145	58	203
Wounding	609	219	828	721	263	984
Wild beasts	72	18	90	66	55	121
Snake-bite	897	547	1,444	652	303	955
Railway...	...	...	...	39	11	50
Other causes	1,078	624	1,702	1,355	812	2,167
Total ...	4,108	2,994	7,102	4,740	3,484	8,224

From the above table it will be seen that during 1900 there is an increase under each, except poisoning and snake-bite, as compared with 1899. Injuries occurring on Railways are inserted for the first time.

Deaths by collectorates.

105. The number of deaths during the year in 16 collectorates was greater and in 8 less than the previous year. The highest number of deaths (1,059) was recorded in the City of Bombay and the lowest (62) in the Upper Sind Frontier District.

106. As usual, the largest number of deaths from snake-bite occur in the rainy season.

107. In all collectorates, except Poona and Kánara, there is a decrease in the number of deaths as compared with the previous year. Ratnágiri, as usual, yields the largest number of deaths, but the Thána Collectorate, from which a large number of deaths are generally furnished, only returns 89 this year. The total figures are not only lower than in the previous year, but considerably below the mean of the previous five years. Perhaps it is in famine years snakes are more sought after and killed before they have the opportunity of doing harm; but this is not absolutely borne out by the figures of 1897, although the total figures of that year are the lowest of the five-year series previous to 1900.

Details of injuries.

108. Of 3,637 deaths by drowning 359 were suicidal, 3,121 accidental and 157 are entered as "otherwise". The latter heading means that when the return was submitted no decision had been come to as to whether these deaths were "suicidal" or accidental. Of the 652 suicidal deaths 359 were the result of drowning, 71 from taking poison, 193 from hanging, 25 from self-inflicted wounds and 4 on Railway "along main line or connected with passenger train".

Other Causes.

Other causes.

109. The recorded deaths from causes other than those specified, number 342,027, of which 180,698 occurred among males and 161,329 among females. The total for 1899 was 254,872, so there is an increase of 87,155. In the following table these deaths are shown for each district and collectorate and the mean for the last ten

years, the number and ratio per 1,000 of population and the number and ratios for 1899 and 1900:—

District.	No.	Collectorate.	Population according to Census of 1891.	Deaths from other Causes.					
				Mean for ten years from 1890 to 1899.	Ratio per 1,000 of Population.	1899.	Ratio per 1,000 of Population.	1900.	Ratio per 1,000 of Population.
Western Registration District.	1	Khándesh	1,460,319	6,357	4·42	21,298	14·58	21,953	15·03
	2	Násik	841,087	6,265	7·50	14,572	17·33	18,303	21·76
	3	Thána	818,967	3,765	4·60	7,725	9·43	10,868	13·27
	4	City of Bombay ...	806,144	17,972	22 38	29,826	37·00	40,746	50·54
	5	Kolába	594,779	3,076	5·27	6,370	10·71	6,774	11·39
Central Registration District.	6	Ahmednagar	887,656	7,764	8·88	17,054	19·22	12,856	14·48
	7	Poona	1,061,449	5,392	5·16	7,266	6·85	9,345	8·81
	8	Sholápur	750,255	3,008	4·10	3,875	5·16	4,676	6·23
	9	Sátara	1,225,511	6,418	5·31	19,460	15·87	18,322	14·95
	10	Ratnágiri	1,105,862	6,936	6·33	7,453	6·74	4,738	4·28
Southern Registration District.	11	Belgaum	1,011,453	9,767	9·80	20,541	20·31	22,354	22·10
	12	Dhárwár	1,050,533	10,726	10·38	20,694	19·69	20,028	19·06
	13	Bijápur	796,286	5,219	6·69	13,390	16·82	12,164	15·28
	14	Kánara	446,156	4,468	10·07	5,994	13·43	5,582	12·51
Gujarát Registration District.	15	Surat	649,824	5,546	7·03	11,027	16·97	15,438	23·76
	16	Broach	341,450	2,021	5·96	5,780	16·93	13,882	40·66
	17	Kaira	871,529	7,075	8·18	23,714	27·21	53,916	61·86
	18	Panch Mahálś	313,381	409	1·33	1,304	4·16	9,345	29·82
	19	Ahmedabad	920,928	4,914	5·37	8,741	9·49	30,526	33·15
Sind Registration District.	20	Karáchi	561,013	2,092	3·79	4,734	8·44	5,151	9·18
	21	Hyderabad	883,836	766	·88	1,620	1·83	2,227	2·52
	22	Thar and Párkar ...	332,401	166	·52	137	0·41	249	0·75
	23	Shikárpur	915,058	869	·96	2,191	2·39	2,447	2·67
	24	Upper Sind Frontier .	174,469	85	·50	106	0·61	137	0·79

Abstract.

Western Registration District	4,521,296	37,435	8·36	79,791	17·65	98,644	21·82
Central do.	5,030,733	29,518	5·96	55,108	10·95	49,937	9·93
Southern do.	3,304,428	30,180	9·27	60,619	18·31	60,128	18·20
Gujarát do.	3,097,112	18,965	6·17	50,566	16·33	123,107	39·75
Sind do.	2,866,777	3,978	1·41	8,788	3·07	10,211	3·56
Presidency ...	18,820,346	120,076	6·41	254,872	13·54	342,027	18·17

The great increase in deaths under this head takes place in the Gujarát Registration District and in a much lesser degree in the Western Registration District, and the explanation is furnished by the Deputy Sanitary Commissioner, Gujarát Registration District, who remarks that—

"This total is swelled by diseases which were aggravated by the famine conditions prevailing. Mention may be here made of deaths from starvation which are entered under the heading of 'Other causes'.

"During the year 5,289 deaths from starvation were reported as under.

From Surat District	80
„ Broach „	42
„ Kaira „	6
„ Panch Mahál District	228
„ Ahmedabad „	4,933

"In the case of Ahmedabad District 4,866 cases of starvation were returned from Ahmedabad City. The táluka returns do not give any idea of the extent to which actual starvation prevailed. As far as possible the diagnosis of starvation was verified by a medical man, but this was rarely possible in the tálukas where opinion of the Village Mukhi and a Panch has to be accepted."

"In Ahmedabad City the deaths were certified on medical evidence and may be taken as on the whole, accurate."

"I had an opportunity of seeing some of the cases, and it is amazing to think how such emaciated creatures could have wandered into Ahmedabad without being seen by one or other of the many peripatetic agents of famine relief, or, at any rate, village authorities."

Deaths since 1889.

110. The number of deaths registered from other causes in each year since 1889 was as follows :—

Year.	Number of deaths from other causes.	Year.	Number of deaths from other causes.
1889	78,044	1895	97,104
1890	70,663	1896	100,112
1891	81,263	1897	143,503
1892	87,196	1898	176,335
1893	89,142	1899	254,872
1894	100,558	1900	342,027

Under this heading all deaths are included which cannot be classed under cholera, small-pox, fever, plague, dysentery and diarrhœa, or injuries. The numbers have been increasing since 1890 and much more rapidly from 1896, and it is due—

(1) To improvement in registration so that now more attention is paid to the cause of death, though considering the agency there is room for further improvement.

(2) To plague, which has made registrars careful not to put too many cases down to "Fever", which attracts attention and enquiry.

(3) And this year to famine causes.

SECTION VII.

GENERAL HISTORY OF VACCINATION.

111. This section has been omitted from this report, and appears separately.

SECTION VIII AND IX.

SANITARY WORKS—MILITARY AND CIVIL.

112. All available information under Military Works has been thrown in a tabular form and will be found in Appendix IV.

The Executive Engineers in charge of Military Works have made the following suggestions:—

Poona. — The remainder of the urinaries in the Ghorpuri Sub-Division, in which the screening of bamboo ribs still form the sides, might have corrugated iron sheeting substituted.

Ventilating holes at the base of screen walls of latrines might be made.

Sátára. — The bath-room walls in European Infantry Barracks near the water pipe stands are very damp, and it would be advisable to put on a half inch thick coating of cement plaster from inside over such portions as become damp.

The ridge ventilators of European Infantry Barracks on plain allow the rain to be blown through and suggests that galvanised iron sheeting be fixed along the upper edges of the main roof below the ridge ventilators and turned partly up so as to prevent water from dashing inside.

Draining the swampy ground round Native Infantry Hospital, Sátára.

Providing wire gauze netting to the windows of the cook-houses of European Infantry Barracks.

Providing stone pavement to the latrine on Hill Fort, Sátára.

Providing a frame and teak batten screen to the seats in No. 4 latrines of European Infantry Barracks on plain.

Purandhar — Open gutters required to carry off sullage water from Hospital out-buildings.

The ventilation in latrines attached to No. 1 Barrack and Hospital requires to be improved.

Nasirabad. — The roof and floors of singlemen's barracks Nos. 8 and 17 require renewal.

Rájkot. — The construction of a masonry branch drain from the masonry drain near the Cavalry Hospital to the main drain in the cantonment is suggested to prevent water-logging.

Mount Abu. — Dust-bins for ashes and refuse to cook-houses.

Sambulpur. — The roofs of the Barracks are low and the interior dark and ill ventilated. When the question of re-roofing the Barracks is taken up, the walls should be heightened and the roof raised.

Karáchi. — The Rutton Talao near the Somerset Lines is in an unhealthy condition and the filling in might well be continued.

Khandalla. — A urinary for the Regimental Institute.

Hoods and chimneys of sheet iron for the fire places of the Barrack and Hospital cook-houses.

Providing quarters for Officers, an Assistant Surgeon, and hospital followers. Providing a mortuary.

113. During the year ending 31st March 1900 there were 165 Municipalities in the mofussil with a population of 2,196,359 souls: the total income of these municipalities, including balance in hand on 1st April 1899, amounted to Rs. 68,95,003. Out of this sum Rs. 14,57,687 were expended on improving the water-supply, drainage and conservancy within municipal limits.

114. There are 23 District Local Boards with 205 Táluka Local Boards: the entire income of these Boards during the year ending 31st March 1900 amounted to Rs. 45,42,921, and out of this sum Rs. 3,22,449 were expended on water-supply, drainage and conservancy.

115. The Bombay Village Sanitation Act of 1889 has been introduced into 301 villages, or one more than the number last year. It would appear that owing to famine and plague, which claims the attention of the District officers, no progress has been made in the establishment of village committees under the Village Sanitation Act. The following table gives the number of villages in each district in which the Act has been introduced :—

Collectorates.	Number of Villages where the Village Sanitation Act of 1889 has been introduced.	Remarks.	Collectorates.	Number of villages where the Village Sanitation Act of 1889 has been introduced.	Remarks.
Khándesh	5		Surat	4	
Násik	35		Broach	12	
Thána	3		Kaira	16	
Kolába	12		Panch Mahál ...	4	
Ahmednagar ...	8		Ahmedabad ...	10	
Poona	45		Karáchi	37	
Sholápur	1		Hyderabad ...	22	
Sátára	7		Shikárpur ...	7	
Ratnágiri	4		Thar and Párkar ...	8	
Belgaum	6		Upper Sind Frontier ...	...	
Dhárwár	20				
Bijápur	35				
Kanára	*Nil.*		Total ...	301	

116. Apparently no further progress has been made in the number of selected villages in which the Village Sanitary Inspection Book has been introduced, as the number stands about the same as it did last year, and this is due to famine and plague. The number of villages where the inspection book has been written up by the Sanitary Department stands at 543 against 359 of the previous year. The following table shows the number of villages in each district:—

Collectorates.	Number of Villages where the Village Sanitary Inspection Book has been introduced.	Number of Villages where the Village Sanitary Inspection Book has been written up by the Sanitary Department.	Remarks.
Ahmedabad	147	8	
Kaira	658	83	
Panch Mahals	81	10	
Broach	421	20	
Surat	259	84	
Thána	143	2	
Ahmednagar	42	10	
Khándesh	53	.....	
Násik	245	37	
Poona	67	11	

Collectorates.	Number of Villages where the Village Sanitary Inspection Book has been introduced.	Number of Villages where the Village Sanitary Inspection Book has been written up by the Sanitary Department.	Remarks.
Sátára	192	22	
Sholápur	109	19	
Belgaum	120	27	
Bijápur	173	10	
Dhárwár	62	10	
Kánara	275	37	
Ratnágiri	44	11	
Kolába	54	.....	
Karáchi	51	42	
Hyderabad	89	55	
Shikárpur	12	11	
Thar and Párkar	38	23	
Upper Sind Frontier	21	11	
Total ...	3,356	543	

SECTION X.

PERSONAL PROCEEDINGS AND GENERAL REMARKS.

117. At the beginning of the year Lieutenant-Colonel O. H. Channer, M.B., D.P.H., I.M.S., was acting as Sanitary Commissioner for the Government of Bombay up to the 20th April 1900. During that time he inspected in the Broach District the Poor-house, the Reservoir Work and the Ashta Famine Relief Work; in Poona the Poor-house and the Moshi and Girchwad Ramshet and Karkala Camps; in Ahmednagar the Poor-house and the works at Kaparwadi, Chas and Warulwadi; in Sholápur the Poor-house and the Hotgi and Kondi Kegaon Works; in Bijápur the Poor-house and the Sangogi Relief Camp and Bádámi; in Násik the Poor-house, the Kirdi Sathe, Wasali and Odal Works, and in Khándesh the works at Chálisgaon and Mehanbhara, and also the Collectorates of Belgaum and Dhárwár. On April 21st, 1900, I took over charge upon return from leave, and as the conditions in Gujarát were then very serious, I went up to Ahmedabad in May and inspected the works about there to enquire into the cause of the high mortality, and also Nádiad, A'nand, Thásra and Dákor; in June, Godhra, Dohad, Mehmedabad, Broach and Surat were visited. In September the Ahmednagar Collectorate was visited and seven relief works inspected; in October the Sholápur Collectorate was visited, and in December I toured in Násik and Khándesh to ascertain the famine prospects and what medical relief was likely to be needed.

118. On 23rd June 1900 a Government Resolution, No. 3261, General Department, was issued, placing the Sanitary Commissioner under the Surgeon-General. I protested against this step, as I consider it is most retrograde and likely to be very injurious to this Department.

119. Many towns were visited in the course of the inspection tours, and though the expenditure on famine was heavy and no sanitary measures of importance save those having connection with famine works were in progress, the general cleanliness was fairly well maintained.

At Yeola the water-supply is not yet complete, and owing to the badly distributed scanty rainfall a scarcity of water is feared.

At Jalgaon a secondary tank, with channel to increase the water-supply to the Mehrun tank, is almost complete. It has been a famine work, and should be finished; for, as long as it remains in this incomplete state, it will not yield any return on the money sunk, and I understand the Municipality are willing, when the work is complete, to give interest on the money expended, or raise a loan to pay for it.

In Surat the people now appreciate the water-supply. The jack wells at the pumping station are not impervious, and should be made so. Drainage works are required, as the present practice of allowing waste water to be turned into old disused wells or to stagnate about stand-pipes is not conducive to the health or comfort of the people.

A scheme to remove the night-soil and properly dispose of it, well away from the city, is being considered.

In Nasik Town sanitary progress has been delayed by plague and famine.

There is no water-supply, and the small length of sewer laid down, which has abolished the old filthy cess-pools by the river bank, has not been taken full advantage of, as no proper branches up the side streets with house-connections have as yet been made.

The bund underneath the bridge retains a useful quantity of water, but it appears to me that steps will have to be taken to prevent silting.

Bhusaval.—There is hardly any progress in the sanitary condition of this Municipality. The chief wants are a supply of water for flushing purposes, which can be obtained from the Tápti river, a mile and a half away, and then a sewerage scheme. The supply from the Tápti might, after filtering a portion, be used for supplementing the drinking water-supply, which is all from wells, only two of which are public. The supply from these wells is usually sufficient, but is short this year.

Another point to which great attention should constantly be paid is the proper lining out of streets and preventing houses and huts being built in an irregular way, cramped up together and obstructing a free current of air.

Manmád.—The water-supply is scanty and the place far from clean. It is too poor at present to undertake any large sanitary works. The population appears, however, to be increasing, and as the point of junction of three Railways, it will probably become a large centre. Houses and huts and chawls are built, and are being built in the most irregular fashion and unless this is checked, it will be the cause of great sanitary trouble hereafter. Streets should be properly laid out and houses and huts built in lines. The land-owner here appears to be able to grant any plot for a building site.

Chálisgaon.—The Sanitary Committee have effected some good by building an underground drain at each end of the town to take off the sullage water of the drains, which used to form a fœted mass inside the walls close to the dwelling houses. The disposal of this water is by no means perfect, but it is an improvement.

There is likely to be scarcity of water here; the people are allowed to squat far too near the inhabited area.

120. The famine has been reported on, and a great deal of information regarding the public health during the time is contained in the previous sections and in the appendices of this report, so that only a brief general sketch is here necessary. It may as well be stated that the rains appeared late and ceased early, and owing to this famine conditions continued to the end of the year, though not so severely as in the previous year.

As has before been stated, it is not so much the quantity of rain that falls as the way in which it falls which is productive of the greatest benefit to the country.

121. In the Western Registration District the collectorates affected were Khándesh and Násik above Ghâts and Thána below. The climatic conditions were coldness in the first part of the year, followed by a rather greater heat than usual in the hot season. The rains fell much later than usual, but the fall was not evenly distributed, and their early cessation in September ruined prospects of the late crops, and this was the condition throughout the Deccan generally.

In *Khándesh,* however, a good cotton crop gave employment to large numbers. The price of food-grains in January was $17\frac{7}{8}$ lbs. of jowári and $17\frac{1}{8}$ bájri to the rupee, and this rose to $16\frac{5}{8}$ lbs. jowári and $16\frac{1}{4}$ lbs. bájri in May, and by December the prices were $30\frac{1}{4}$ lbs. jowári and $26\frac{3}{4}$ lbs. bájri. The average price during the year 1898 was per rupee jowári $44\frac{7}{8}$ lbs. and bájri $40\frac{11}{16}$ lbs.

The whole area and population of Khándesh were affected, and the percentage relieved was at the beginning of the year 15·08, the numbers rising gradually till the middle of March to 18·87, and then gradually declining till in November, 0·61 per cent., were on relief. Of those relieved in January 11·69 per cent. were workers and 3·39 gratuitously relieved. In the beginning of March the number of workers was at the maximum 13·22 per cent., and in the next fortnight of 18·87 relieved, 5·92 were gratuitously so. The numbers on gratuitous relief declined then to 4·0 in the early part of June and then rose again to 6·04 at the end of September; after which it again declined to 0·52 by the end of November. The number of workers also gradually declined from the maximum noted above till at the end of November it was 0·04. The birth-rate was 31·18 per 1,000 and the death-rate 97·03. The famine was severe in this district, more especially in the north-western parts, in which there is a large Bhil population, unwilling

to do regular work, and at the best of times just living from hand to mouth and with no reserve stocks. The mortality was highest in April, in which month occurred a fierce attack of cholera, then a large decline occurred ; but in July there was an increase, continued still in August, in which month the mortality was almost as great as in April, due in July to 'Cholera','Fevers' and 'Dysentery and Diarrhœa', and in August a heavy mortality registered under the heads of 'Fever' and 'Dysentery and Diarrhœa'. The gratuitous relief was highest just before the maximum mortality took place and was again expanded during the rainy season. The people weakened from previous privation were unable to withstand the cholera and the diseases incidental to the wet season, and it is doubtful if all the deaths were registered. There were 52 camp hospitals and 12 poor-houses attended by 46 medical officers. 20,141 sick were treated and 5,921 deaths occurred.

Násik.—The climatic conditions were much the same as in Khándesh. The price of bájri was per rupee in January 17 lbs., in May 16 $\frac{3}{8}$ lbs. and at the end of the year 24½ lbs. The average price in 1898 was just over 32 lbs. per rupee. Almost the whole area of the district was famine-affected. The percentage relieved of those affected was in January 3·36, rising by the middle of March to 13·42, and then falling gradually till in November the percentage was 1·82. The highest percentage of workers was 9·58 in March. The percentage of those gratuitously relieved rose from 0·44 in January to 3·84 in mid-March, the maximum, and continued with slight variations about, though below that figure till November, when it sank to 0·47. The north and eastern parts and Peint in the west were chiefly affected. The birth-rate was 32·44 and the death-rate 76·42 per 1,000. The mortality rose from the beginning of the year till it was high in April ; in May it fell, but again rose in June and attained its maximum in July, and then gradually fell again till it was nearly the normal rate in December. In April the chief cause of mortality was 'Cholera', but there was also a high death-rate from 'Fever'. In July the positions were reversed, the highest death-rate being due to 'Fever' ; but there was also a heavy mortality from 'Cholera'. There were 13 camp hospitals and 8 poor-houses attended by 23 medical officers. 9,815 sick were treated and 2,289 deaths occurred.

Thána.—In this district only a small area and less than one-eighth of the population were considered as being affected by famine conditions. Many cattle were, however, with attendants, sent into the forests here from other parts to graze in the hope of keeping them alive, and there was a certain amount of immigration, and destitute wanderers from Bombay City were deported to camps in this collectorate, but great difficulty was found in keeping them together. In the beginning of the year the percentage obtaining relief to the numbers affected was 0·46, rising by the middle of May to 11·65, and then declining. The highest percentage of workers was 9·94 per cent. in the middle of May, and then gradually declined. In July the percentage was 0·81 and got less, as owing to rains it was difficult to continue works. Gratuitous relief was not commenced till March, 0·28 per cent., gradually expanded during the rains till the first of September when the figures were 4·50 per cent., and then when the crops and labour prospects were good the numbers on gratuitous relief declined. The birth-rate was 25·57 and the death-rate 71·64 per 1,000. The highest mortality took place in the month of June and was also high in July and August, the rainy season, and in these three months cholera was prevalent, being most wide-spread and fatal in June, nearly two-thirds of the deaths in that month being attributed to it. This district throughout the year was not free from plague, the mortality being 2·50 per 1,000 for the year.

There were 3 camp hospitals and 1 poor-house attended by 4 medical officers. 683 sick were treated and 186 deaths occurred.

122. In the Central Registration District the Collectorates of Poona, Sátára, Ahmednagar and Sholápur were affected. In this group the climatic conditions were much the same. Cold weather in the early part of the year, with a hot season somewhat hotter than usual, and a rainfall not well distributed and ceasing early to the detriment of the late crop, and so relief, but not on such a large scale, had to be continued. There was immigration from Native States into Sholápur and Ahmednagar and to a less extent into Poona, but the people

being hardy and thrifty and accustomed to famine conditions from the year 1897, the death-rate per 1,000 of population did not reach to twice the normal rate of the previous five years.

Poona.—Nearly 78 per cent. of the population suffered, and of these in January 1·73 per cent. were on relief of some kind, the numbers increasing steadily till the middle of May, when 11·79 were on relief, at which period also there were the maximum numbers 8·19 on works. The numbers on works then gradually declined and gratuitous relief was increased till the end of the rainy season and was then contracted, but the numbers still relieved by the end of November amounted to 3·46 per cent.

The price of wheat, jowári and bájri was in January 15⅛, 19½ and 17¼ lbs. per rupee, respectively; in May 14, 17¼ and 16⅛ lbs. per rupee, respectively; and at the end of the year 14, 17¼ and 24⅛ lbs. per rupee, respectively. In 1898 the average price was 18, 28 and 30 lbs. per rupee, respectively. The birth-rate was 27·52 and the death-rate 50·86 per 1,000 of population. The greatest mortality occurred in July and was nearly the same in August—two months of heavy rain. In July the largest number of deaths was ascribed to cholera, but the fever mortality was almost as high. In August cholera subsided to great deal and the greatest mortality was shown under the heads of 'Fever' and 'Dysentery' and 'Diarrhœa'.

The mortality from plague, though not high compared with that from the other causes registered, was higher than in any other collectorate. The heaviest incidence occurred at the latter end of the rainy season. No cases occurred in the camps.

There were 18 camp hospitals and 2 poor-houses attended by 11 medical officers. 6,727 sick were treated and 835 died.

Sátára.—89 per cent. of the population were affected. There does not seem to have been much immigration into this collectorate. The percentage of relief to those affected was in the early part of January 1·35 and rose gradually till in the early part of June it was 5·79, at which period also was the maximum number of workers 4·71 per cent. After this the numbers of both workers and those on gratuitous relief declined till at the end of the year the total number relieved was 0·73 per cent. The price of food-grains in January was 16½ lbs. of jowári and 16⅝ bájri to the rupee, in May 15⅝ lbs. and 15⅜ lbs., respectively, and at the end of the year 17 lbs. and 19¾ lbs. The average price, during the year 1898, was per rupee jowári 28⅜ lbs. and bájri 27⅞ lbs. The birth-rate was 28·24 and the death-rate 41·49 per 1,000 of population. The heaviest mortality took place in June and was nearly as much in July, and then declined. The high mortality in these months was largely due to cholera. The mortality from fever during the year was not high, nor was there much 'Plague' mortality, the largest number of deaths being entered as due to 'Other Causes'.

There were 9 camp hospitals and 3 poor-houses attended by 12 medical officers. 2,315 sick treated and 377 deaths.

Ahmednagar.—The whole district was affected and at the begining of the year 7·69 of the population were on relief, the numbers increasing gradually till in the third week of June the numbers were 31·18 per cent., of which 22·74 were workers. Then the number of workers began to decrease, but gratuitous relief increased for the next fortnight and the numbers on both kinds of relief diminished till at the end of November the numbers were 4·14 per cent. The prospects in adjacent districts being favourable, large numbers emigrated in search of work. The price of food-grains in January was 17⅞ lbs. of jowári and 17⅝ lbs. of bájri to the rupee, in May 16½ lbs. and 16⅞ lbs., respectively, and at the end of the year 20 lbs. and 24⅛ lbs. The average price during the year 1898 was per rupee jowári 32⅜ lbs. and bájri 33¼ lbs.

The birth-rate was 27·98 and the death-rate 66·22 per 1,000. The heaviest mortality took place in July, but was also high in April and May, and in these three months the greatest mortality was due to 'Dysentery' and 'Diarrhœa,' but at the same time 'Cholera' was prevalent.

There were 46 camp hospitals and 3 poor-houses, attended by 40 medical officers. 26,335 sick were treated, with 3,093 deaths.

Sholápur.—The whole district was affected and the percentage of relief at the beginning of the year was high, being 13·88, increasing to 22·80 at the end of April, at which time there were 15·49 per cent. of workers, and after a slight decline increasing again in the third week of June to 23·31 relieved, of which 15·46 were workers; after this a gradual decrease took place, but owing to a badly distributed rainfall relief of both kinds had to be continued, and by the end of November, in spite of good deal of emigration, the percentage of people on relief was 11·45, of which 7·74 were workers and 3·71 were gratuitously relieved.

The price in lbs. per rupee of—

	Wheat.	Jowári.	Bájri.
	lbs.	lbs.	lbs.
Was in January ...	17⅝	21½	19⅝
April	15⅞	18⅜	17⅞
June	15⅞	18¾	17⅞
December ...	15⅞	20⅛	25½

whilst in 1898 the average price was wheat 20 lbs., jowári 34 lbs. and bájri 36 lbs.

The birth-rate 28·43 and the death-rate 54·62 per 1,000. The highest mortality took place in July and next in May and then June and August, due chiefly to dysentery and diarrhœa, but at the same time cholera was prevalent, especially so in July. The chief cause of mortality during the year is ascribed to dysentery and diarrhœa, and then comes 'Fever'. The mortality from plague was slight.

There were 20 camp hospitals and 3 poor-houses, attended by 23 medical officers. 23,130 sick treated, with 3,667 deaths.

123. In the Southern Registration District the Collectorates of Bijápur and Belgaum suffered from famine conditions. In Bijápur just over 50 per cent. of the population were affected, the climatic conditions were much the same as in Sholápur, and the percentage of relief was in January 1·05 of the population affected. All the relieved being workers, by the end of April the numbers amounted to 6·62, of which 4·74 were workers. Then the numbers on relief gradually declined, till near the end of November the percentage was 1·07, of which 0·65 were being gratuitously relieved. The prices of jowári and bájri were in January 22½ and 20⅝ lbs., in May 21⅝ and 20¼ lbs. and in December 24½ and 25½ lbs. to the rupee, contrasted with an average of 45⅜ lbs. jowári and 39⅓ lbs. bájri in the year 1898.

The birth-rate was 29·97 and the death-rate 31·89 per 1,000 of population. The highest mortality occurred in July, August and September. Cholera prevailed in these months, but the chief mortality was registered under the heading 'Other Causes' and the small number of deaths ascribed to 'Fever' is noticeable

There were 3 camp hospitals and 1 poor-house, attended by 5 medical officers. 781 sick were treated and 131 deaths occurred.

Belgaum has an equable climate and the rainfall this year, though more than usual, failed in three tálukas. Under 35 per cent. of the inhabitants were affected at the beginning of the year. 0·41 per cent. of the affected population were relieved as workers. The numbers on relief gradually rose till the third week in July when 1·37 per cent. were being relieved, of which 0·93 were workers. The numbers then fell till in September the camps were closed and gratuitous relief ceased in November.

The birth-rate was 30·93 and the death-rate 43·36 per 1,000: the heaviest mortality was in June, July, August and September. Cholera accounts for nearly half the deaths in June, and in July and August the majority of deaths were ascribed to 'Other Causes', which in August made up more than half the total number of deaths in that month. The mortality attributed to 'Fever' is very low, but on the other hand the mortality under the heading 'Other Causes' is very high.

This collectorate as well as Sátára and Bijápur, which have the lowest death-rates except Poona, show low rates of mortality from 'Fever' and heavy ratios under the heading 'Other Causes'. This may be due to the Registrars being very careful not to enter deaths under 'Fever' as if the fever rate was seen to be going up an enquiry would be made as regards plague. This explanation may hold good as regards Sátára and Belgaum, both of which have been heavily visited by plague, but is not so good as regards Bijápur; but everywhere in the Presidency the mortality under the head 'Other Causes' is increasing as Registrars generally are aware that the entry of the majority of deaths under the head 'Fever' attracts the attention of examining officers.

124. The Gujarát Registration District was very seriously affected by famine. The Collectorates of Ahmedabad, Broach, Kaira and the Panch Maháls suffered throughout their entire area, and in Surat, though the famine was not so severe, 75 per cent. of the population were affected.

The climatic conditions were cold in the early part of the year with a wide variation between the maximum (day temperature) and the minimum (night temperature), and to this, no doubt, was due some of the increased mortality which began to show itself in this part; but it was not the sole cause. Then the hot weather came on and it was hotter than usual and accompanied by a very strong hot wind blowing up clouds of dust which made it hard work for the people to fulfil their tasks. The rains set in late, practically not till July, and after September they ceased, so that famine conditions still continued, but fortunately the conditions were not so severe as there was a large growth of wild grasses on the seeds of which the people supported themselves.

Immigration from surrounding Native States took place to a large extent, especially into the Panch Maháls and Ahmedabad, and these wanderers getting into poor condition before reaching relief helped to swell the mortality. No correct estimate of their numbers can be furnished and they soon learnt to avoid, stating where they came from. The mortality in all the Gujarát Districts was very high and the causes are briefly—

(1) The practice of not storing grain, so that when their food was suddenly restricted they supplemented it with deleterious and indigestible substances.

(2) Clinging to their houses on this insufficient food to look after their cattle, and then when the cattle died, coming on to the relief works in an impoverished condition, and then, being dissatisfied with the wage they were able to earn, wandering away again.

(3) The large influx of people from Native States. Many coming in in poor condition.

(4) The cold weather at the end of the year, and then the heat which prevailed throughout Gujarát accompanied by a hot wind.

The amount of relief given in the various districts in January varied from 1·82 in Kaira, 1·36 in Surat, 5·19 in the Panch Maháls, 6·68 in Ahmedabad to 23·88 in Broach, and this rose by the end of April to 12·68 in Kaira, 3·19 in Surat, 16·55 in the Panch Maháls, 18·78 in Ahmedabad and 25·15 in Broach. The differences in the percentages relieved in the various districts do not appear to have had any appreciable effect on the mortality, for, leaving out Surat, the death-rate in May for Broach, which had the largest numbers on relief, is the highest in May after the Panch Maháls and Kaira, for the same month, in which district relief was the lowest, had the lowest mortality, though of course that was very high.

Towards the end of the rains, as it was apprehended that, owing to the enfeebled condition of the people, a heavy mortality from malaria might take place, distribution of free medical relief on an extensive scale was organised and continued to the close of the year. This was much appreciated by the people and was, I consider, beneficial.

In the *Ahmedabad* Collectorate the mortality, which in January had been a little over twice the average ten year mean ending 1896, rose to more than ten times the average in May, and though it fell after that month, yet a very high ratio over the mean was maintained to the end of the year.

The birth-rate was 19·15 and the death-rate 173·03 per 1,000. Over 64 per cent. of the mortality was ascribed to 'Fever'. In May there was a severe outbreak of cholera, which continued, though not so severely, for the following months, subsiding in October.

The percentage of relief given to the population affected was in January 6·68 per cent., and this rose to 18·78 by the end of April, decreased somewhat in May owing perhaps to the cholera, but increased again to 24·10 in the early part of August; after which there was a steady decline, till after September it became more rapid and fell towards the end of November to 1·62 per cent. Of the 18·78 per cent. relieved in April 13·48 were workers and 5·30 received gratuitous relief, and in August of the 24·10 relieved 12·44 were workers and 11·66 on gratuitous relief. The numbers on gratuitous relief were high till the end of September to tide the people over the period till the crops matured.

The price of food-grains in lbs. per rupee was in—

January,	18½ lbs.	Jowári,	17 lbs.	Bájri.
May,	18½ lbs.	do.	16½ lbs.	do.
December,	34⅓ lbs.	do.	34 lbs.	do.

In 1898 the average price was 36¼ lbs. jowári and 33⅓ lbs. bájri.

There were 56 camp hospitals and 12 poor-houses: medical officers during the year numbered 50. 48,864 were treated with 20,336 deaths.

In the *Broach* Collectorate the mortality in January was just under three times the average ten year mean and rose to just over ten times the average in May, then gradually declining till the close of the year, but being then more than three times the normal.

The birth-rate was 24·89 and the death-rate 163·82 per 1,000. Over 54 per cent. of the deaths were ascribed to 'Fever'. In May there was a heavy outbreak of cholera and a large increase in the deaths from fever.

The percentage of relief in Broach was in January 23·88 per cent. of the people, rising to 33·63 early in March, falling then till June and again rising to 39·64 in the early part of August; after which it gradually declined till by the end of November 8·82 per cent. were on relief. At the corresponding periods above noted there were 20·02 per cent. of workers in January, 27·87 in March, 15·81 in August and 0·70 at the end of November. The numbers on gratuitous relief gradually expanded from 3·86 in January to 23·83 in March and from July to the middle of November. This form of relief was high, varying from 10·67 in July to 11·66 at the middle of November.

The price of food-grains in lbs. per rupee was in—

January,	19½ lbs.	Jowári,	18¾ lbs.	Bájri.
May,	19 lbs.	do.	17 lbs.	do.
December,	29 lbs.	do.	27½ lbs.	do.

The average prices in 1898 were 35⅓ lbs. jowári and 29½ lbs. bájri. There were 33 camp hospitals and 6 poor-houses. The number of medical officers employed was 28; there were 15,270 sick treated with 5,818 deaths.

Káira.—The mortality in January was just over three times the ten year average ending 1896, and this increased in May to just over eight times the average and then dropped, though keeping from three to five times above the average, till in December it was below three times the normal.

The birth-rate was 17·29 and the death-rate 148·44 per 1,000. In this collectorate the largest number of deaths, 41 per cent., were due to 'Other Causes' and 32 per cent. to 'Fever'. There was a heavy outbreak of cholera in May.

The percentage of relief given to the population was in January 1·82, rising by the end of April to 12·68, decreasing for the month of May, and then rising again till it reached in the early part of August the maximum 29·91; after which it fell gradually at first, but rapidly later, till by the end of November 0·41 per cent. were on relief. At the corresponding periods the workers were 1·38 in January, 10·05 in April and 17·06 in August. During July and August the number of workers was high. The gratuitous relief, which was low at first, 0·44 in January, was largely expanded from July to September, being 14·62 at the middle of August. Camps were closed by the middle of November.

The price of food-grains in lbs. per rupee was in—

January,	17½ lbs.	Jowári,	17 lbs.	Bájri,
May,	18 lbs.	do.	16 lbs.	do.,
December,	32½ lbs.	do.	32½ lbs.	do.,

whilst the average price in 1898 was 31⅜ lbs. jowári and 32⅞ lbs. bájri. There were 22 camp hospitals, 11 poor-houses, 35 medical officers, 32,231 sick and 10,652 deaths.

Panch Maháls.—This collectorate suffered severely. It has a large Bhil population unused to regular work and is surrounded and intermixed with Native States. In January the death-rate was almost six times the normal rate of the ten years ending 1896 and rose rapidly, till in May it was over forty times the average; but this great contrast is due partly to May being, as a rule, a very healthy month, and the ten year average for the month is low. At the close of the year the rate was a little more than twice the normal.

The birth-rate was 18·11 and the death-rate 281·06 per 1,000. Nearly 60 per cent. of the deaths are put down under the heading "Fever" and 22 per cent. are ascribed to "Dysentery and Diarrhœa". The number of deaths entered under the heading "Cholera" is relatively small, and considering the outbreak was severe, and lasted four months, I am of opinion that all the deaths due to this cause were not entered.

The percentage relieved in January was 5·19, rising gradually, till by the 1st September 40·24 per cent. were on relief; after which the numbers declined, till by the end of November 4·25 per cent. remained. Of the 5·19 relieved, 4·47 were workers, and the numbers of workers as well as of those on gratuitous relief gradually rose till the end of April, when there were 13·18 per cent. of workers to 3·37 gratuitously relieved. In May the numbers went down as in the other Gujarát Districts, but again rose in June; but as the rains came on the number of workers diminished, whilst there was a large expansion of gratuitous relief, there being on the 1st September 11·58 workers to 28·66 gratuitously relieved.

The price of food-grains in lbs. per rupee was in—

January,	15½ lbs.	Bájri.
May,	16½ lbs.	do.
December,	32 lbs.	do.

In 1898 the average price was 32¾ lbs. bájri. There were 16 camp hospitals, 5 poor-houses, 25 medical officers, 29,566 sick treated with 15,139 deaths.

Surat.—This district was not so severely affected as the others in Gujarát and did not appear to suffer so much from immigration. The mortality in January was 1·68 over the ten year mean and rose in May to just over five times the normal and then gradually subsided, till in December it was 0·69 over the monthly mean.

The percentage of relief of population affected was 1·36, all of whom were workers, gratuitous relief commencing in the next fortnight. The numbers increased till the middle of March, 3·90, at which period were the maximum number of workers 3·60. The numbers on relief were maintained about the same level till May, when there was a drop, but an increase took place in June

and continued through the rains till September. From March the number of workers diminished till by the middle of August camps were closed; on the other hand the numbers on gratuitous relief went up and attained to a maximum 7·05 in the middle of August.

The birth-rate was 31·25 and the death-rate 79·84 per 1,000. Nearly 50 per cent. of the deaths are entered under the heading 'Fever' and nearly 30 per cent. under 'Other Causes.'

The price of food-grains in lbs. per rupee was in —

January,	17⅝ lbs.	Jowári,	16¼ lbs.	Bájri.
May,	18⅜ lbs.	do.	16¾ lbs.	do.
December,	29⅝ lbs.	do.	26⅜ lbs.	do.

In 1898 the average price was 34 lbs. jowári, 30 lbs. bájri. There were 8 camp hospitals and one poor-house. The medical officers numbered 9. Patients treated were 2,444 with 437 deaths.

125. In the Sind Registration District the Thár and Párkar Collectorate was affected by famine, and there was a good deal of immigration into the principal town, Umarkot, of famine-stricken people who had not made adequate provision for the march across the desert and arrived in such a poor condition as to seriously swell the mortality.

The mortality, which in January was over three times the ten years mean, gradually diminished till May, when it was a little over twice the normal. In June a great increase took place, and in July it was eight times the monthly average, and then again declined till in December it was under three times the normal.

The birth-rate was 10·07 and the death-rate 55·88 per 1,000. In January the mortality was almost entirely ascribed to 'Fever'. In June cholera began and accounted for nearly half the mortality in that month, and in July the outbreak was still more severe, and more than half the mortality was due to it.

126. In none of the famine-affected districts did the number of births exceed the number of deaths, and a very serious decline from the previous five years' mean can be noted in most of them, due to the privations endured.

The majority of the deaths have been ascribed to 'Fever', and it was so wide-spread that a sharp watch was maintained for relapsing fever, but expert Bacteriological research failed to detect it, and although, as our Registrars are not highly educated men, and medical certificates as to the cause of death are seldom furnished, there can be little doubt that many cases were entered under the head of 'Fever' which should have been entered under other causes, yet there was a good deal of malaria present to attacks of which people succumbed more readily than at other times.

127. Cholera was widespread, but the deaths attributed to this are not so many as might be expected, and perhaps this is due partly to deaths being omitted when the outburst was severe and sudden, and partly that in the earlier stages at least the deaths were entered under the heading 'Dysentery and Diarrhœa'.

128. Plague did not appear in the Famine camps and poor-houses, and did not, except in Poona and Belgaum, obtain much hold in the Famine districts.

Small-pox deaths showed an increase, but considering the year and the amount of immigration, the disease was well kept under.

129. The deaths from starvation are given for each district in the following table :—

Deaths from Starvation.

Districts.	1900.												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Ahmedabad	261	551	593	660	708	402	468	371	281	349	178	111	4,933
Broach	26	5	10	...	...	...	1	...	...	...	...	1	43
Kaira	4	...	...	...	1	...	1	...	...	...	...	...	6
Panch Mahals... ...	52	97	47	20	12	...	...	...	...	...	...	...	228
Surat	3	1	6	19	38	6	3	2	...	1	1	...	80
Thána	...	...	1	2	...	...	...	...	...	...	...	...	3
Ahmednagar	...	...	1	...	...	...	...	...	...	...	...	...	1
Khándesh	24	...	...	...	...	1	1	1	...	...	...	...	27
Násik	...	...	...	1	...	...	1	...	1	...	...	...	3
Poona	6	2	...	...	...	1	21	12	2	4	...	...	48
Sátára	...	...	...	...	...	...	...	...	...	...	...	...	...
Sholápur	...	...	...	...	...	...	...	...	...	...	...	...	...
Belgaum	...	2	1	...	...	...	1	...	1	...	...	...	5
Bijápur	2	...	...	...	...	...	...	...	...	...	...	...	2
Thar and Párker ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	378	658	659	702	759	410	497	386	285	354	179	112	5,379

Even with the best arrangements, such deaths in a widespread and severe famine are to be expected. The largest number of deaths is reported to have occurred amongst wanderers and the Gujarát district shows the highest figures. Of these deaths by far the largest number took place in and around the town of Ahmedabad. Here there were a large number of wanderers, who objected to go to the poor-house, and when in tried to get out as soon as they could and preferred to beg, and so eventually succumbed. If they had remained in the poor-house, and gathered strength enough to enable them to work, they could have gone to a work and earned a sufficient wage to keep them.

The dead were picked up by organized stretcher-parties and brought for examination before burial.

130. The sanitary measures taken at camps were directed to the preservation of the purity of the water-supply, the selection of places for latrines and burial grounds, hospitals and wards for infectious diseases, the proper laying out of camps, and the building of kitchen shelters and poor-houses.

131. Medical officers as many as were available were placed in charge of camp hospitals and poor-houses, and besides treating the sick they constantly went round the camp inspecting the condition of the people, seeing to the cleanliness of the camp and the water-supply, and when considered advisable disinfecting the wells with permanganate of potash. They also saw that the food and other articles sold in the camp bázárs were good and wholesome. These camps and medical officers were supervised in turn by the District Medical Officer.

The water-supply in most of the Deccan districts was of the usual average quality, and on most of the Famine camps and kitchens and poor-houses sanitary precautions were taken to safe-guard it, and supply it as free from contamination as possible to the people. In Gujarát, however, in certain parts the water is brakish or tends to become so as the hot weather advances. Twenty-one samples were sent for analysis from the various districts of Gujarát and 15 were pronounced unfit for potable purposes. In ordinary times the people being in good health do not appear to suffer from the use of the water to which they are accustomed, but with the failure of the rains the yield of water was lessened and it was probably more contaminated than usual, and had more deleterious effect upon a population whose stamina had deteriorated; but this was a subsidiary cause, just as the effect of cold and heat acting on frames weakened by want of proper food.

It was in many cases impossible to prevent workers taking water from unauthorized sources, or bringing in unwholesome food, and so starting cholera, which, when it broke out, caused the people to scatter and infect other places. In the hot weather when the people were getting low and the deaths were numerous, a longer rest was given in the time and the work lightened, and the

rule regarding compulsory residence at camps was relaxed. Gratuitous relief was largely expanded during the rains to assist the cultivators in their field operations.

132. A list of the officers employed as District Medical Officers during the year is given below :—

List of District Medical Officers on Famine Duty during the year 1900.

Name.	District.	From	To	Remarks.
Captain W. G. Richards, I. M. S.	Ahmedabad ...	1st January ...	23rd March.	
Civil Surgeon	Do. ...	24th March ...	8th April.	
Captain J. H. MacDonald ...	Do. ...	9th April ...	29th June ...	From 18th May he was in charge of half the District.
Dr. J. H. Walsh	Viramgám ...	18th May ...	31st December ..	He was Supervising Medical Officer.
Civil Surgeon	Ahmedabad ...	30th June ...	Do. ...	Took charge from Dr. MacDonald.
Dr. J. H. Walsh	Do. ...	2nd July ...	21st July ...	District Medical Officer of the entire District.
Captain H. A. F. Knapton ...	Do. ...	21st July ...	19th August ...	Part of the District.
Dr. J. H. Walsh	Ahmedabad ...	19th August ...	31st December...	District Medical Officer of the whole District.
Captain G. O. F. Sealy	Kaira and Panch Mahals.	1st January ...	30th January	
Do.	Kaira ...	.....	17th July.	
Dr. J. Van Millingen	Do. ...	18th July ...	31st December.	
Dr. S. S. Nightingale	Panch Mahals ...	31st January ...	25th July.	
Assistant Surgeon M. J. Mistri ...	Do. ...	25th July ...	31st December.	
Dr. Morrison	East Mahals ...	13th May ...	27th October ...	Supervising Medical Officer.
Dr. J. W. Winder	Broach ...	1st January ...	29th May.	
Do.	Broach and Anklesvar talukas.	29th May ...	12th July.	
Civil Surgeon	Do. ...	13th July ...	15th July.	
Dr. W. S. J. Shaw	Do. ...	15th July ...	4th October.	
Dr. M. O.'Brien	Jambusar, Amod and Wágra talukas.	29th May ...	Do.	
Do.	Broach ...	5th October ...	31st December.	
Dr. R. A. Farrer	West Khándesh .	1st January ...	19th September.	
Dr. E. H. Moore	East Khándesh .	17th January ...	Do.	
Do.	Entire Khándesh.	20th September .	31st December.	
Captain F. D. Brown, I. M. S. ...	Ahmednagar ...	1st January ...	15th July.	
Dr. E. Maynard	Do. ...	16th July ...	31st December.	
Dr. H. W. Beach	Násik ...	3rd February ...	28th December.	
Civil Surgeon	Do. ...	29th December ..	31st December.	
Dr. T. A. Starkey	Sátára ...	14th May ...	Do.	
Dr. H. C. Patrick	Sholápur ...	18th January ...	Do.	
Dr. J. H. Murrey	Poona ...	5th February ...	13th June.	
Civil Surgeon	Do. ...	14th June ...	30th June.	
Deputy Sanitary Commissioner, C. R. D.	Do. ...	1st July ...	11th July.	
Dr. E. Winter	Do. ...	12th July ...	1st September.	
Deputy Sanitary Commissioner, C. R. D.	Do. ...	2nd September .	31st December.	

Most of them were medical men sent out by the Secretary of State for India, and it cannot be denied that, though they had very little previous acquaintance with the districts or the language or touring, they worked with zeal and rendered valuable assistance in keeping up the sanitary condition of the camps and reporting on the condition of the people. I would bring to notice the work performed by Dr. Farrer in Khándesh and Dr. Nightingale in the Panch Mahals during the first and worst half of the year and Dr. Maynard in Ahmednagar during the latter half. The great fault is, however, that such officers are not appointed early enough in the famine and changed far too frequently. It is obvious that a District Medical Officer requires to know the district he is to serve in, if he is to be of use early, and the sooner he is appointed the sooner he can begin to know it, and when he does know it he should be kept there. At the close of the previous year when famine was in full swing, only three District Medical Officers had been appointed, whereas directly famine is declared in a collectorate a Medical Officer should be appointed, and I think if this had been done the Government would have been apprized earlier of the condition of affairs. Also with regard to the Sanitary Commissioner, it was pointed out to Government at the close of the famine of 1897, that a Commissioned Medical Officer should be given to the Sanitary Commissioner to aid him in his office duties. If he travels

much his office work accumulates and gets into arrears, and if he attends to office work the proper amount of inspection cannot be done. The Collector of every seriously-affected Famine district has a personal assistant at once given him to enable him to get free from office work and go about his district, and it is very much more needful that similar assistance should be given to the Sanitary Commissioner, who has a much larger area to work in. It is true such assistance was given ultimately, for a short time, but far too late.

133. The number of Assistant Surgeons, Hospital Assistants and Compounders on Famine duty is given below:—

Statement showing the Number of Medical Subordinates employed on Famine duty in the Bombay Presidency during the year 1900.

Medical Subordinates.	On Permanent Establishment.					Temporarily employed.	Remarks.
	Visiting Camp and Poor-house Hospitals in addition to their own duties.	In charge Camp or Poor-house Hospitals.				In charge of Camp and Poor-house. Hospitals.	
		Military.		Civil.			
		Bombay Presidency.	From outside Bombay.	Bombay Presidency.	From outside Bombay.		
Assistant Surgeons	2	...	...	...	...	29	
Hospital Assistants	65	...	23	73	12	93	
Compounders	11	...	...	5 *	...	109 *	* In all 17 Compounders were in independent charge of Camp Hospitals.

134. From before April the demand for Medical Officers exceeded the supply and compounders worked as Medical Officers at some camp hospitals. As a rule these officers worked well and did their duty manfully, eight of them dying from illness contracted whilst on work. The names of these officers are given below and also the names of the officers commended for their zeal and conduct:—

Statement showing the Names of Medical Officers who were reported to have done satisfactory work while on Famine duty.

Rank, Grade and Number.	Name of Medical Officer.	District.
Temporary Assistant Surgeon ...	G. M. Benjamin	Ahmedabad.
Do. ...	Jyotish Chandra Paul ...	Do.
1st Class Hospital Assistant, No. 53	Baburao Narayen	Do.
Do. No. 144	Bunkay Bihari	Do.
Do. No. 94	Shaik Ainiudin	Do.
2nd Class Hospital Assistant, No. 228	Dawlatram Daliabhai ...	Do.
Do. No. 218	Gundo Narsinh	Do.
3rd Class Hospital Assistant, No. 373	Satyaprasad Bhagwanlal ...	Do.
Do. No. 322	J. Paul Mascarenhas ...	Do.
Do. No. 372	Ganpatram Dalsukhram ...	Do.
Compounder	Ujainishi Kastur	Do.
Do.	Kashinath Balkrishna ...	Do.
Do.	Nagarlal Purshotam ...	Do.
Temporary Assistant Surgeon ...	T. Foster	Kaira.
Do. ...	G. W. Beaumont	Do.
Do. ...	A. C. Sen	Do.

Rank, Grade and Number.	Name of Medical Officer.	District.
1st Class Hospital Assistant, No. 111	Gangadher Bapu	Kaira.
Do. No. 80	Shanker Hari	Do.
Do. No. 114	Mahabir Prasad	Do.
2nd Class Hospital Assistant, No. 148	Mahomed Baksha	Do.
Do. No. 213	Chimanlal Mahasukhram ...	Do.
Do. ...	Dalchand Bishanlal ...	Do.
3rd Class Hospital Assistant, No. 370	Bhagwant Gopal	Do.
Temporary Hospital Assistant ...	Nanalal Nagindas	Do.
Compounder	Mohanlal Ranchod... ...	Do.
Do.	Ram Saroop	Do.
Do.	Mohanlal Chotalal... ...	Do.
3rd Class Hospital Assistant, No. 377 ...	Ganpat Mangesh Wagh ...	Panch Mahâls.
Temporary Hospital Assistant ...	Vithal R. Belsare	Do.
Do. ...	*Balaji Shanker Nene ...	Do.
Acting Hospital Assistant... ...	Bhailal Narharbhai... ...	Do.
Do.	Narbadashanker Chaganlal ...	Do.
Temporary Assistant Surgeon ...	Babu H. P. Mukerji ...	Broach.
Do. ...	A. A. Rosemond	Do.
Do. ...	P. D. Pagnis	Do.
2nd Class Hospital Assistant ...	David Aaron	Do.
3rd Class Hospital Assistant, No. 431 ...	Narayen Prasad	Do.
Compounder	Ravji Krishnaji	Do.
Do.	Krishnaji Vyanktesh ...	Do.
Temporary Hospital Assistant ...	N. S. Kulkarni	Thána.
Compounder	M. M. Mule	Do.
Temporary Assistant Surgeon ...	Rajani Kanta Dutta ...	Násik.
2nd Class Hospital Assistant ...	Minguel Johnstone	Do.
Do. ...	Bhawanilal Harishanker Trivedi .	Do.
Compounder	Shanker Ramchundra ...	Do.
Do.	Ramchundra Tukaram ...	Do.
Temporary Assistant Surgeon ...	Lala Jagannath	Khándesh.
Do. ...	A. Smith	Do.
1st Class Hospital Assistant ...	Hari Mahadik	Do.
3rd Class Hospital Assistant ...	Narhar Pandurang	Do.
Do. No. 317 ...	Keshavlal Motilal	Do.
Do. ...	Mukund Sakharam Barve ...	Do.
Compounder	Abaji Narayen	Do.
Do.	Parsharam Balwant ...	Do.
Do.	Shaik Hussein wd. Shaik Imam .	Do.
2nd Class Hospital Assistant, No. 171 ...	†Vishnu Narayen	Ahmednagar.
3rd Class Hospital Assistant, No. 369 ...	Balkrishna Rajanna ...	Do.
Do. No. ...	Ramchundra Ghosal ...	Do.
3rd Class Hospital Assistant, No. 282 ...	Bhimaji Krishna	Do.
Temporary Hospital Assistant ...	†Bhau Vithoji	Do.
Do. ...	T. Bhagwat	Do.
Do. ...	Ganesh Parsharam	Do.
Do. ...	Anant Krishna Selgar ...	Do.
Do. ...	Dhondo Krishna	Do.
Do. ...	Waman Baburao	Do.
Do. ...	Balu Khandu	Do.
Compounder	Ganesh Laxuman	Do.
Do.	Keshav Devrao	Do.
Do.	Shivram Gangadhar ...	Do.
Do.	Ramchundra Yeshwant ...	Do.
Do.	Govind Krishna	Do.
Do.	Shanker Malhar	Do.
Do.	Shanker Shivram	Do.
Do.	S. V. Kulkarni	Do.
Do.	Shanker Chimaji	Do.
Do.	Dattatraya Balwant ...	Do.
Do.	Narhar Hanmant Joshi ...	Do.
Do.	Rango Narayen Naik ...	Do.
Do.	Sayed Ahmed Sayed Nur ...	Do.

* Highly commended.

† Di[illegible] very good work.

Rank, Grade and Number.	Name of Medical Officer.	District.
Assistant Surgeon	V. B. Karandiker	Sholápur.
3rd Class Hospital Assistant, No. 352 ...	Gopalji Bhulabhai	Do.
Do. No. 359 ...	Shanker Ranoji Jadhav ...	Do.
Do. No. 378 ...	Govind Keshav Joga ...	Do.
Temporary Hospital Assistant ...	D. R. Kate	Do.
Do. ...	V. M. Samat	Do.
Do. ...	D. R. Bhende	Do.
Do. ...	K. V. Agnihotre	Do.
Compounder	*Rahiman Allisaheb ...	Do.
Do.	*Sheshappa Chimaya ...	Do.
Do.	*Narsinh Bhau	Do.
Do.	*Yankambari Rajanna ...	Do.
Do.	*Chintaman Sadashiv ...	Do.
1st Class Hospital Assistant, No. 97 ...	Shripat Nickam	Poona.
Do. No. 678 ...	Raffiudinkhan	Do.
3rd Class Hospital Assistant, No. 825 ...	Maikulal	Do.
Temporary Hospital Assistant ...	Gangadher Vishnu	Do.
Do. ...	Gangaram Vithal	Do.
Do. ...	Chintaman Waman... ...	Do.
Compounder	Laxuman Narayen	
Do.	Abaji Keshav Aleker ...	
Do.	Laxuman Vishnu Bhagwat ..	
2nd Class Hospital Assistant, No. 232 ...	Govind Rangnath	Sátára.
3rd Class Hospital Assistant, No. 354 ...	Waman Bhiccappa	Do.
Temporary Hospital Assistant ...	M. S. Tatpate	Do.
Compounder	Hari Narayen	Do.
Temporary Compounder	Krishna Appa Joshi ...	Belgaum.
3rd Class Hospital Assistant, No. 224 ...	Hari Shriniwas	Bijápur.
Do. No. 303 ...	Hari Narayen	Do.
Compounder	Narso Bhimrao	Do.

* In temporary sole charge of hospitals at various times.

Statement showing the names of Medical Officers who died while on Famine duty.

Serial No.	Names of Medical Officers.	District.	Camps.	Date of death.
1	1st Class Hospital Assistant, No. 94, Shaik Ainiudin.	Ahmedabad ...	Gáikwár's Haveli Hospital.	15th Sept. 1900. Died of cholera.
2	3rd Class Hospital Assistant Mukund S. Barve.	Khándesh ...	Prakásha ...	7th May 1900. Died of cholera.
3	Temporary Assistant Surgeon A. Smith.	Do. ...	Dharangaon ...	28th Feb. 1900. Died of cholera.
4	Temporary Hospital Assistant Waman Baburao.	Ahmednagar...	Palwa, Chass ...	8th August 1900. Died of cholera.
5	Temporary Hospital Assistant Balu Khandu.	Do. ...	Jambulwada ...	4th July 1900.
6	2nd Class Hospital Assistant, No. 218, Gundo Narsinh.	Ahmedabad ...	Dholera P. H. ...	14th June 1900. Died of cholera.
7	Temporary Compounder Nagarlal Purshotam.	Do. ...	Matoda	8th May 1900.
8	Temporary Compounder Sayed Ahmed Sayad Nur.	Ahmednagar...	Visápur Tank ...	7th May 1900. Died of cholera.

135. The year has been one of hard work on the part of the Deputy Sanitary Commissioners and all have worked with energy and zeal.

Lieutenant-Colonel O. H. Channer, I. M. S., was Acting Sanitary Commissioner for the first four months of the year and travelling constantly visited the greater part of his charge.

Lieutenant-Colonel A. W. F. Street, D.S.O., I. M.S., also visited his charge thoroughly and part of the time had, in addition to his own heavy work, the charge of D. M. O., Poona.

The hardest work fell upon Majors Dyson and Arnim. Major Dyson, I. M. S., was in Gujarát, through the most trying time and later on in the year supervised the arrangements for medical relief throughout the district.

Major Arnim not only had hard work in connection with the Famine in Thar and Párkar, but also was highly commended by the Commissioner in Sind for the zeal and skill with which he combated the cholera outbreak in the district.

Ráo Bahádur S. V. Kantak, the Superintendent of Vaccination in Bombay, with his staff, worked energetically to combat the outbreak of small-pox in the City (see Section VI, paragraph 65) and was also deputed by Government to assist Captain Lamb, I. M. S., in his investigation with regard to the prevalence of *relapsing* fever in Gujarát.

My office was very hard worked during the year, and I have great pleasure in bringing to notice the large amount of work, cheerfully done, by my Assistant Mr. Keess, and the clerks.

J. W. CLARKSON, Lieut.-Colonel, I. M. S.,
Sanitary Commissioner for the Government of Bombay.

APPENDIX I.

ANNUAL REPORT OF THE SANITARY BOARD FOR THE YEAR 1900.

1. *Preliminary*.—Plague and famine again pressed hard on the Municipalities last year; and we would again draw attention to paragraph 8 of our Report for 1898. Government gave various Municipalities considerable grants-in-aid for plague expenditure; and it is hoped that the financial state of these Municipalities will recover this year to some extent.

Under the orders issued in Government Resolution, General Department., No. 3261, dated 23rd June 1900, Surgeon-General Bainbridge was appointed President of the Sanitary Board. The members, as before, were Lieutenant Colonel Clarkson, I. M. S., Sanitary Commissioner, and Mr. Pottinger, M.I.C.E., Sanitary Engineer.

2. *Sukkur*.—The pumping machinery was thoroughly overhauled and repaired, at a cost of Rs. 4,500, which has resulted in one-third of the fuel expenditure being saved.

It is proposed to drive a cross collecting gallery, to increase the water-supply in the cold weather, when the large spring in the original tunnel always diminishes as the river falls. It is not understood why the supply of this spring should fluctuate with the height of the river, as the temperature of the former is five degrees, or more, higher than that of the river, and the spring water is much harder, so that it must come from a considerable depth, and apparently form a subterranean source.

3. *Hyderabad*.—The new engines at the river lift have been working very satisfactorily and with a very large saving in fuel. Plans and estimates for improved settling tanks, and for a pier to carry the suction pipe out into the river, have been approved of by Government, and sent to the Municipality. If Government, in the Military Department, would only pay the arrears due for extra water supplied to the troops (a matter which has now been under discussion for some years, and is believed to have been at last finally settled), the Municipality would have funds to start these works. Plans and estimates for filter beds, a high level reservoir in the Fort, and for covering in the Fort lift reservoir, are still under consideration. The drainage scheme is postponed for want of funds.

4. *Karáchi*.—The sewage farm is said to have been more profitable last year; but its management, as a *true* sewage farm, seems to have decidedly deteriorated since the departure of the late Superintendent. There is, apparently, no reason why it should not be as profitable as the Madras sewage farms, if properly managed.

5. *Ahmedabad*.—The drainage scheme, prepared by Mr. B. Latham, was practically shelved for over a year; as the Public Works Department Executive Engineer could not spare time to work out the necessary alterations. It has lately been taken up again; but we think that it will be quite impossible for the Executive Engineer to carry out a work of this importance satisfactorily and without recurring delays, in addition to his own heavy work, even if he is given an Assistant, who will naturally have had little, if any, experience of such work. A Special Engineer, with drainage experience, should be employed.

The sewage farm has much improved under the care and management of the present Superintendent. The Municipality have now sent him to study the crop systems at the Surat Government Farm, and the Karáchi Sewage Farm; and as he is an intelligent man, with an interest in his work, he will probably gain valuable information.

6. *Kaira and Mehmadabad*.—The plans and estimates for the water-supply projects for these two towns have been prepared by the Sanitary Board, and will be submitted shortly.

7. *Yeola*.—The water works have been practically at a standstill for over two years, although about half the work had then been done. The Public Works Department Executive Engineer has had no time to push on the work, and the Municipality (as is always the case) will not provide the extra taxation for the necessary funds, unless they are specially and continuously urged.

8. *Ahmednagar*.—The Kapurwadi Tank was not completed as a famine work before last monsoon, consequently no water was stored over the aqueducts, and the water-supply to the town and cantonment (as anticipated in our reports for the last two years) will probably be a matter of serious difficulty this hot weather. The work is *now* practically done; and the project for completing the distribution in the remaining two-thirds of the town will be sent in shortly. It would be advisable to have a similar system of distribution, under pressure, in the Cantonments.

9. *Poona*.—The drainage and water-supply projects, prepared by the Sanitary Engineer, were revised in accordance with the advice of Mr. Santo Crimp; and finally approved of by the Municipality, and by the Government of Bombay. They are now before the Government of India, as they can only be carried out by a loan on liberal terms; this, it is to be hoped, will be given, as the works are very urgent and necessary for the health of both the City and Cantonments.

The results of the small sugarcane experiment at the Kirkee Government Farm were confirmed by that at the Manjri Government Farm (the latter being at the site of the proposed Municipal farm): and in each case the effluent was found to produce about ten per cent. more sugar than poudrette, which is the standard manure for sugarcane in the neighbourhood of Poona. The Government Agricultural Chemist was deputed to make full analyses of the cane, juice, and soil; and his report may be expected shortly. The experiments are being continued; and it is under contemplation to carry out a large practical test at Manjri on ten acres of land; but this should not delay the early commencement of the Poona Sewerage Works, the urgency of which is shown by the fact that during the first-half of last year, when plague was absent from the City of Poona, the death-rate (which has been increasing yearly), was from 50 to 60 per 1,000. The experiments are only to prove how the effluent can be most profitably utilised; but as the drainage scheme will take three years to carry out, this knowledge can be ascertained during that time. If the profits are only half what the small experiments show, there can be no risk to Government; and looking to the heavy yearly cost of the measures for counteracting plague (which the City cannot bear in the future), we submit that even if there was some risk, it would be more than justified; and would probably be cheaper in the end. We would, therefore, most strongly urge that the sewerage works in the City should be commenced at once, leaving the question of the final disposal of the sewage to be settled hereafter. Although such farms have not paid in England, it must be remembered that water is an absolute necessity for cultivation in India, whilst it is only an added difficulty in England.

10. *Sholápur.*—We would beg to refer to paragraph 16 of our Report for 1898. Nothing has yet been done towards providing a second pumping engine; and the danger, of course, increases yearly, as the engine is now being worked 50 per cent. more than what it was designed for.

The Public Works Department Executive Engineer has not even yet had time to work up the sewage scheme, which is urgently wanted.

The source of the water-supply of Sholápur is the Ekruk Tank, from which the water passes to the pumping station by an open channel about 4¼ miles long. Naturally, there is great danger of contamination to the water in this channel; and we would urge the necessity for filter beds at the pumping station, as at Poona; and for protection to the channel of supply.

11. *Belgaum.*—The water-supply project for the town and cantonments, prepared by the Sanitary Board, has been transferred by the Bombay Government to the Madras Military Authorities, as the troops are under that Command. The very scanty supply in the wells at present shows the urgent need for such a scheme; as this scarcity is, more or less, recurrent every year. Unless there are early rains, the situation will probably become very difficult, if not dangerous, this hot weather, as at Ahmednagar.

12. Regarding the other towns and projects referred to in our Report for 1898, we can only repeat what we have said in paragraph 10 of our Report for last year.

G. BAINBRIDGE, M.D., Surgeon-General, } President.

J. W. CLARKSON, Lt.-Col., I. M. S., Sanitary Commissioner to the Government of Bombay,

J. C. POTTINGER, M.I.C.E., Sanitary Engineer and Member of the Sanitary Board, } Members.

APPENDIX II.

No. 845 OF 1901.

ANNUAL REPORT OF THE HEALTH OFFICER OF THE PORT OF BOMBAY FOR THE YEAR ENDING 31ST DECEMBER 1900.

This is the seventeenth Annual Report of the Bombay Port Health Department. It is divided into thirteen short headings, *viz* :—I, Summary; II, Incoming Vessels; III, Outgoing Vessels; IV, Infectious Disease on Vessels in the Harbour; V, Port Observation Camp; VI, Harbour Patrol; VII, Disinfection of Ships and Infected Cargo; VIII, General Health of the Shipping; IX, Red Sea Pilgrim Traffic; X, Emigration Traffic; XI, Sanitary State of Harbour and Foreshore; XII, Epidemic of Small-pox, Cholera and Plague; and XIII, Establishment.

I.—SUMMARY.

2. The following tabular statement gives a summary of the shipping of the Bombay Port and the work in connection therewith for the year ending 31st December 1900 :—

Table No. 1.

Vessels including country craft.	Number of vessels inspected.	Number of persons inspected, including crew on vessels.	Number of native crew and 3rd Class or deck passengers disinfected during the year.	Number of vessels disinfected.	Number of persons vaccinated.	Number of persons segregated or rejected.	DISEASES AND NUMBER OF CASES OF EACH.					
							Plague.	Cholera.	Small-pox.	Measles.	Chicken-pox.	Jigger.
Entered	156	23,192	5,607	46	2,064	145	11	5	12	3	...	125
Left	65,734	1,149,858	71,555	...	...	17,169	59	2	1,347	19	17	...
In Harbour during the year ...	76	.....	...	76	713	...	14	78	33	6	2	...
Total for 1900 ...	65,966	1,173,050	77,162	122	2,777	17,314	84	85	1,392	28	19	125
Total for 1899 ...	65,822	1,193,339	48,349	87	32	17,662	155	1	2	7	7	168

3. It will be seen that 65,966 vessels of all sorts with 1,173,050 crew and passengers, including those who arrived from certain infected ports, were examined during the year. The clothing and bedding of 71,555 native crew and third class or deck passengers who embarked on vessels for ports out of India were disinfected against the clothing and bedding of 44,864 disinfected during the year preceding. This increase in disinfection work is due to the fact that the baggage of all native crew, deck and third class passengers (with the exception of troops) proceeding to ports out of India was disinfected, whereas for 1899 all native crew's clothing and bedding were disinfected from 13th February 1899 and that of deck and third class passengers from 14th June 1899. The baggage of 987 returning pilgrims, 2,877 deck passengers arriving from Jigger-infected ports and 1,743 crew and passengers of other infected vessels which arrived in Bombay was disinfected. The total number of persons vaccinated was 2,777 against 32 during the previous year, as there were 1,392 cases of small-pox detected at the outward and inward inspections and on board the vessels lying in the harbour during the year 1900. The number of plague cases detected was 84 against 155 for the year preceding. There was an increase of cholera cases, the number being 85, while during the year 1899 there was only one case. There were 125 jigger cases—43 less than in 1899. Most of the rejections at the medical inspections were allowed to return to the city, which accounts for the few cases of plague recorded during the year 1900.

II.—INCOMING VESSELS.

4. The subjoined Table No. 2 gives details regarding vessels which entered the Port during the year.

Table No. 2.

Year.	Total number of Steamers and Square-rigged Vessels which entered Bombay Harbour from Ports other than Indian Ports.	Number of Passengers only.	Total number of Native Sailing Craft which entered Bombay Harbour from Ports other than Indian Ports.	Number of Passengers only.	Total number of Steamers and Square-rigged Vessels which entered Bombay Harbour from Indian Ports.	Number of Passengers only.	Total number of Native Sailing Craft which entered Bombay Harbour from Indian Ports.	Number of Passengers only.
a	*b*	*c*	*d*	*e*	*f*	*g*	*h*	*i*
1900	622	10,562	274	158	1,697	477,116	34,673	21,231
1899	527	25,660	250	484	1,375	309,915	44,267	6,001

5. As there is no record kept of the crew on most of the vessels entering the Port, the numbers are not given in the above table. There were 462 troops, 987 Mecca pilgrims and 507,156 passengers, principally from ports near Bombay, making up the total of 508,605 passengers as compared with 342,060 during the year 1899.

6. The number of ships which had infectious disease on board on or before entering the harbour is given in the following table :—

Table No. 3.

Class of Vessels.	Number of Ships.	Total number of Crew and Passengers inspected.	Number of Passengers from East Africa disinfected on account of presence of Jigger among them and those from other vessels for infectious diseases.	Diseases and Number of Cases of each.						Number of Persons vaccinated.
				Plague.	Cholera.	Small-pox.	Measles.	Chicken-pox.	Jigger.	
Troop-ship	...	...	.....	...	...	...	...	...	...	...
Vessels from Jigger-infected Ports ...	27	4,947	2,877	...	...	...	...	...	125	...
Other Vessels ...	19	5,236	1,743	11	5	12	3	...	...	2,064
Total ...	46	10,183	4,620	11	5	12	3	...	125	2,064
1899 ...	32	7,624	2,623	4	...	1	2	7	168	32

7. Six steamers which entered the harbour had 11 cases of plague at the time of arrival or during the voyage. The cases were sent for treatment to the Plague Hospitals in Bombay, and the effects of the crew and passengers as well as the ships were thoroughly disinfected in accordance with the Venice Convention Regulations. Detailed information in connection with these cases will be found in paragraph 46 of this report under "Heading" XII, Epidemic of Cholera, Small-pox and Plague. There were five cases of cholera (of which three died) on board the steamer "St. Ninian" during her voyage from Calcutta. Two cases were found on board the steam-ship "Massilia" and were removed to the hospitals on shore. The vessels were thoroughly disinfected. The bilges were pumped dry and cleaned; the drinking-water tanks on board were emptied and disinfected with Potassium Permanganate solution before they were allowed to be filled with a fresh supply of drinking-water. Eight steamers had in all 12 cases of small-pox and two vessels had 3 cases of measles. All these cases were removed to the hospitals and the ships disinfected. Those of the unprotected crew and passengers among whom small-pox occurred were vaccinated. Enteric fever is not noticed as it is not one of the infectious diseases under the Act.

8. Out of the 70 vessels with 8,728 crew and passengers which arrived at Bombay from Jigger-infected ports on the South-East Coast of Africa, 27 vessels had 125 persons suffering from Jigger and ulcers due to Jigger at the time of arrival. They were removed to the Gokuldas Tejpal Hospital for treatment. The crew and passengers on infected Jigger-ships had their clothing and bedding disinfected before they were allowed to mix with the general population.

9. Examination and disinfection of incoming vessels were carried out according to the revised rules issued by Government under their Notification No. 1645-P., dated 13th March 1900. Accordingly, all arrivals from plague-infected ports, *viz.*, Karáchi, Persian Gulf Ports Hedjaz, Glasgow, Port Said, Alexandria, Aden, Cape Town, Mauritius, Hongkong and other Eastern Ports were inspected up to the 5th of April 1900, after which date only "infected vessels" were inspected in accordance with letter No. 2128-P., dated 31st March 1900, from the Secretary to Government. This letter authorized the Port Health Officer not to inspect "Healthy Vessels" arriving at Bombay from plague-infected ports until such time as the City of Bombay is considered free from plague, which would be for the purposes of this order, when the number of plague deaths reported in the published returns falls below 25 in a week. In the case of infected vessels, Government directed that the passengers and crew need not be detained, if they were apparently healthy; but Rule VIII, (1), (3), (4) and (5) of the new rules—a copy of which is given below—should be carried out, and similarly, in the case of "Suspected Vessels," Rule IX, (1), (2), (3), (4)—a copy of which is also given—should be followed.

"Rule VIII.—'Infected Vessels,' or vessels so classed, will be dealt with as follows, when Bombay is free from plague, and may be so dealt with at other times at the discretion of the Health Officer :—

(1) The sick will be disembarked under the directions of the Health Officer and sent to the camp or hospital, whether ashore or afloat, appointed for the purpose.

(3) The soiled linen and personal effects of the passengers and crew which, in the opinion of the Health Officer, may be considered as infected, shall be disinfected in accordance with the rules contained in the appendix.

(4) The bilge-water will, after disinfection, be pumped out and a fresh supply of drinking water will be stored on board.

(5) All parts of the vessel, which have been occupied or frequented by plague patients, will be disinfected under the supervision of the Health Officer, and any other parts of the vessel may also be disinfected at the discretion of the Health Officer."

"Rule IX.—'Suspected Vessels,' or Vessels so classed, will be dealt with as follows :—

(1) Passengers and crew will be medically examined by the Health Officer.

(2) The soiled linen and personal effects of the passengers and crew which, in the opinion of the Health Officer, may be considered infected, shall be disinfected in accordance with the rules contained in the appendix.

(3) The bilge-water will, after disinfection, be pumped out and a fresh supply of drinking water will be stored on board.

(4) All parts of the vessel, which have been occupied or frequented by plague patients, will be disinfected under the supervision of the Health Officer, and any other parts of the vessel may be disinfected at the discretion of the Health Officer."

10. The table No. 4 furnishes the total number of vessels, crew and passengers examined on arrival at Bombay, including the ships with the returning pilgrims from Jeddah and those which arrived from Jigger-infected ports.

Table No. 4.

ths.	Number of Vessels inspected.			Number of Persons inspected.							Number of Persons segregated.			Number of Plague cases found on arrival at Bombay.
				Passengers.		Crew.		Total.						
	Number of Steamship and Square-rigged Vessels.	Number of Native Sailing Craft inspected.	Total.	Steamship and Square-rigged Vessels.	Country Craft.	Steamship and Square-rigged Vessels.	Country Craft.	Number of Passengers.	Number of Crew.	Number of Passengers and Crew.	Passengers.	Crew.	Number of Passengers and Crew	
1900.-														
January ...	18	...	18	863	...	1,884	...	863	1,884	2,747	6	1	7	...
February ...	33	...	33	1,595	...	3,902	...	1,595	3,902	5,497	18	10	28	1
March... ...	18	...	18	1,256	...	1,926	...	1,256	1,926	3,182	6	...	6	...
April	11	...	11	413	...	1,114	...	413	1,114	1,527	6	...	6	3
May	10	1	11	1,326	6	759	8	1,332	767	2,099	18	1	19	2
June	10	1	11	699	14	873	9	713	882	1,595	26	...	26	4
July	11	...	11	801	...	1,095	...	801	1,095	1,896	9	...	9	1
August ...	4	...	4	249	...	343	...	249	343	592	1	...	1	...
September ...	5	10	15	408	16	414	124	424	538	962	...	5	5	...
October ..	5	3	8	491	10	362	25	501	387	888	2	6	8	...
November ...	8	1	9	535	...	457	11	536	468	1,003	26	...	26	...
December ...	7	...	7	512	...	692	...	512	692	1,204	4	...	4	...
Total ...	140	16	156	9,148	46	13,821	177	9,194	13,998	23 192	122	23	145	11
Total for 1899.	391	807	1,198	41,823	3,037	29,104	2,946	41,860	32,050	76,910	228	10	238	4

11. In addition to the vessels mentioned in the foregoing table three vessels with Australian horses were visited on their arrival at this Port in accordance with Government Resolution, General Department, No. 1142, dated 24th February 1900. The horses were examined by the Principal, Bombay Veterinary College, and certified to be free from tick pest, or other contagious disease. The names of the vessels and the number of horses so examined are given below :—

(1) S. S. "Moshtari", arrived on 23rd July 1900 with 428 horses, of which 143 were from Queensland.

(2) S. S. "Clitus", arrived on 25th August 1900 with 296 horses and 8 mules from Melbourne and Brisbane.

(3) S. S. "Itola", arrived on 25th November 1900 with 599 horses from Australia.

Certificates of pratique were granted to these steamers on the production of a certificate from the Principal, Veterinary Department, to the effect that the horses were free from ticks.

III.—Out-going Vessels.

12. The number of outward bound vessels and the passengers and crew inspected month by month from 1st January to 31st December 1900 are shown in the sub-joined table No. 5.—

Table No. 5.

Months.	Number of Vessels inspected.			Number of Persons inspected.							Number of Persons rejected.			Number of Plague cases which developed among the rejections.
				Passengers.		Crew.		Total.						
	Number of Steam-ship and Square-rigged Vessels inspected.	Number of Native Sailing Craft inspected.	Total.	Steam-ships and Square-rigged Vessels.	Country Craft.	Steam-ships and Square-rigged Vessels.	Country Craft.	Number of Passengers.	Number of Crew.	Number of Passengers and Crew.	Passengers.	Crew.	Total Passengers and Crew rejected.	
1900.														
January	266	6,860	7,126	55,070	21,007	14,594	53,729	76,077	68,323	144,400	2,500	526	3,026	7
February	245	7,381	7,626	48,447	10,197	10,625	46,623	58,644	57,248	115,892	2,374	221	2,595	9
March	276	7,021	7,297	59,100	5,671	14,209	48,366	64,771	62,575	127,346	3,024	275	3,299	15
April	276	7,692	7,968	55,633	5,313	14,931	51,094	60,946	66,025	126,971	2,804	217	3,021	11
May...	274	8,872	9,146	51,139	6,324	14,108	53,029	57,463	67,137	124,600	1,466	138	1,604	4
June	192	2,322	2,514	21,729	2,270	11,459	16,051	23,999	27,510	51,509	495	119	614	1
July...	156	1,005	1,161	18,635	2,031	10,201	7,790	20,666	17,991	38,657	238	86	324	4
August	174	1,298	1,472	21,013	2,119	10,421	7,780	23,132	18,201	41,333	228	116	344	...
September... ...	164	3,414	3,578	21,519	3,198	8,841	23,225	24,717	32,066	56,783	93	329	422	...
October	226	5,126	5,352	54,742	4,126	11,045	33,378	58,863	45,323	104,191	1,170	111	1,281	5
November... ...	248	5,895	6,143	49,748	6,089	12,990	37,678	55,837	50,668	106,505	1,398	138	1,536	2
December	258	6,093	6,351	55,856	6,743	13,421	35,651	62,599	49,072	111,671	1,379	89	1,468	1
Total for 1900 ...	2,755	62,979	65,734	512,631	75,088	147,745	414,394	587,719	562,139	1,149,858	17,169	2,365	19,534	59
Total for 1899 ...	2,891	61,703	64,594	503,212	62,937	149,110	401,170	566,149	550,280	1,116,429	16,015	1,409	17,424	117

13. The medical examination of the crew and passengers of all vessels which left Bombay for ports out of India was carried out by day, on shore, in sheds specially arranged for that purpose.

14. Out of 1,149,858 outward bound crew and passengers inspected, 19,534 or 1·70 per cent. were prevented from sailing. Most of the rejections were turned into the town. The remainder were sent to the Port Observation Camp, where 59 of them developed plague.

15. It will be seen from Table No. 6 that out of 65,734 outgoing vessels with 562,139 crew and 587,719 passengers examined during the year, 234 vessels with 26,195 crew and 18,756 passengers left for Aden, or ports in the Red Sea and Europe; 642 vessels with 36,165 crew and 28,319 passengers for other ports out of India, and the remaining 64,858 vessels with 499,778 crew and 540,644 passengers for Indian ports, including Burma.

Table No. 6.

Months.	Number of Vessels with Crew and Passengers left Bombay for Aden, Red Sea and Europe.				Number of Vessels with Crew and Passengers left for Ports out of India (including Persian Gulf) other than Aden, Red Sea and Europe.				Number of Vessels left for Ports in India, including Burmah.				Total Number of Vessels which sailed for all Ports with their Crew and Passengers.			
	Number of Vessels.	Crew.	Passengers.	Total Crew and Passengers.	Number of Vessels.	Crew.	Passengers.	Total Crew and Passengers.	Number of Vessels.	Crew.	Passengers.	Total Crew and Passengers.	Total Number of Vessels.	Total Number of Crew.	Total Number of Passengers.	Total Number of Crew and Passengers.
1900.																
January	16	1,802	997	2,799	106	5,415	3,376	8,791	7,004	61,106	71,704	132,810	7,126	68,323	76,077	144,400
February	21	2,345	1,617	3,962	75	2,973	464	3,437	7,530	51,930	56,563	108,493	7,626	57,248	58,644	115,892
March	21	2,691	3,043	5,734	76	3,934	3,132	7,066	7,200	55,950	58,596	114,546	7,297	62,575	64,771	127,346
April	19	2,348	2,445	4,793	63	3,009	940	3,949	7,886	60,668	57,561	118,229	7,968	66,025	60,946	126,971
May	25	2,293	1,840	4,133	44	2,948	1,413	4,261	9,077	61,996	54,210	116,206	9,146	67,137	57,463	124,600
June	21	2,190	1,062	3,252	31	2,403	1,192	3,595	2,462	22,917	21,745	44,662	2,514	27,510	23,999	51,509
July	18	2,016	959	2,975	32	3,403	7,147	10,550	1,111	12,572	12,560	25,132	1,161	17,991	20,666	38,657
August	17	1,756	868	2,624	28	2,685	5,165	7,850	1,427	13,760	17,099	30,859	1,472	18,201	23,132	41,333
September ...	15	1,671	932	2,603	28	1,763	1,135	2,898	3,535	28,632	22,650	51,282	3,578	32,066	24,717	56,783
October	13	1,912	2,324	4,236	36	2,163	1,550	3,713	5,303	41,243	54,994	96,242	5,352	45,328	58,868	104,191
November ...	18	2,365	1,469	3,834	51	2,501	1,211	3,712	6,074	45,802	53,157	98,959	6,143	50,668	55,837	106,505
December ...	30	2,806	1,200	4,006	72	3,069	1,594	4,663	6,249	43,197	59,805	103,002	6,351	49,072	62,599	111,671
Total ...	234	26,195	18,756	44,951	642	36,166	28,319	64,485	64,858	499,773	540,644	1,040,422	65,734	562,139	587,719	1,149,858
1899 ...	297	28,815	23,811	52,626	527	27,235	14,622	41,857	63,770	494,230	527,716	1,021,946	64,594	550,280	566,149	1,116,429

16. The disinfection of the clothing, bedding and any suspected articles of native crew (excluding Japanese crew, who are specially exempt from this operation) and of the third class or deck passengers and native servants, who sailed on vessels bound for ports out of India, was carried out as in the previous year at Malet Bandar, where the Port Health Stove was situateds up to 7th September 1900. On the 8th September 1900 the stove was removed to the shed specially constructed for disinfection purposes near Prince's Dock, where the kit of the persons mentioned above was disinfected, while the kit of the crew and passengers, who sailed in native sailing craft for foreign ports, was disinfected by means of the Municipal Sterilizer at the Modikhana Hospital. The method of disinfection was the same as was described in paragraph 23 of the report for the year 1899.

17. The following table No. 7 shows that the clothing and bedding of 50,452 native crew and of 21,103 third class or deck passengers were disinfected during the year. The number of persons who arrived by pilgrim, Jigger and other infected ships and whose effects were disinfected, will be found on reference to tables Nos. 4 and 9.

Table No. 7.

Months.	Number of Persons who sailed by Steamers and whose kit was disinfected.			Number of Persons who sailed by Native Sailing Craft and whose kit was disinfected.			Total Number of Persons whose kit was disinfected.		
	Crew.	Passengers.	Total.	Crew.	Passengers.	Total.	Crew.	Passengers.	Total.
1900.									
January	5,372	2,689	8,061	841	134	975	6,213	2,823	9,036
February	3,837	751	4,588	722	80	802	4,559	831	5,390
March	4,249	3,712	7,961	563	52	615	4,812	3,764	8,576
April	3,351	1,190	4,541	665	47	712	4,016	1,237	5,253
May	3,332	2,114	5,446	353	5	358	3,685	2,119	5,804
June	3,750	1,276	5,026	56	3	59	3,806	1,279	5,085
July	4,395	914	5,309	...	...	...	4,395	914	5,309
August	4,162	1,171	5,333	7	...	7	4,169	1,171	5,340
September	2,672	1,324	3,996	62	...	62	2,734	1,324	4,058
October	3,077	1,883	4,960	174	4	178	3,251	1,887	5,138
November	3,695	1,781	5,476	507	28	535	4,202	1,809	6,011
December	3,990	1,890	5,880	620	55	675	4,610	1,945	6,555
Total ...	45,882	20,695	66,577	4,570	408	4,978	50,452	21,103	71,555
Total for 1899, *viz.*, from 14th February to 31st December 1899.	33,165	7,881	41,046	3,659	159	3,818	36,824	8,040	44,864

18. The native crew of vessels proceeding to ports out of India are, as a rule, inspected three times—firstly, before embarking, so as to meet the letter of the Convention; secondly, when their clothing and bedding are being disinfected the day before they sail; and, thirdly, just *immediately* before the vessel sails.

19. The sanitary condition of all outward bound vessels, including native sailing craft, was, as a rule, carefully attended to. All of them were examined and found to be in a satisfactory sanitary condition, and were so certified in the Bills of Health issued to them. The crew's quarters were painted, or limewashed, before departure. The tween decks and holds of ships in ballast were cleaned before leaving the port, and the tween decks of coal ships were thoroughly washed down and in most cases limewashed, or disinfected with a solution of carbolic acid. This was necessary, as the holds of such coal ships are used for the purposes of nature by the coolies, numbering from 500 to 1,000, who discharge the coal. The bilges of native craft were generally clean at the time of inspection; but those that were found to be dirty or containing filthy water had to postpone their departure until thoroughly cleaned.

IV.—Infectious Disease on Vessels in the Harbour.

20. All the steamers, square-rigged vessels and native craft, which became infected while at sea or among whose crew and passengers plague developed after their arrival in port, also the dock labourers found on vessels and coolies removed to plague hospitals from the docks and bandars are enumerated in the table annexed. All these vessels and those in Table No. 3 were thoroughly disinfected according to the Venice Sanitary Convention and Indian Ports Act Rules.

Table No. 8.

Months.	Steamers.												Buggalows, Tonies, Prows, Steam Launches, &c.										Number of Persons who were attacked with Plague at Bandars and in the Docks.		Total Number of Cases of Infectious Diseases in the Bombay Harbour.											
	Number of Ships.	Cholera.		Small-pox.		Measles.		Chicken-pox.		Plague.			Number of Native Craft.	Cholera.		Small-pox.		Measles.		Chicken-pox.		Plague.				Total number of infected Vessels.	Cholera.		Small-pox.		Measles.		Chicken-pox.		Plague.	
		Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.		Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1900.																																		
January...	1	...	...	7	...	...	...	...	...	...	...		2	...	...	1	1	...	...	1	...	1	1	...	...	3	...	...	8	1	...	...	1	...	1	1
February	10	...	...	10	...	4	...	...	...	...	...		4	...	...	1	1	...	...	...	...	4	3	...	...	14	...	...	11	1	4	...	...	...	4	3
March ...	2	...	...	11	5	...	...	...	...	...	...		4	1	1	2	2	...	...	...	...	2	2	...	...	6	1	1	13	7	...	...	...	...	2	2
April ...	1	...	...	...	...	1	...	...	...	...	...		1	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	1	...	..	...	...	...
May ...	...	...	...	...	...	...	...	...	...	...	...		6	19	19	...	...	...	...	...	...	...	...	...	...	6	19	19	...	...	...	...	...	...	...	...
June ...	1	1	1	...	...	...	...	...	...	...	...		10	13	11	...	...	...	...	...	...	1	1	...	...	11	14	12	...	...	...	...	...	...	1	1
July ...	7	7	6	...	...	...	...	...	...	...	...		7	7	7	1	1	...	...	...	...	1	1	...	...	14	14	13	1	1	...	...	...	...	1	1
August ...	1	3	3	...	...	...	...	...	...	...	...		9	19	17	...	...	...	...	...	...	...	...	...	...	10	22	20	...	...	...	...	...	...	...	...
September ...	1	...	...	...	...	1	...	...	...	1	1		4	6	6	...	...	...	...	...	...	...	...	...	...	5	6	6	...	...	1	...	...	...	1	1
October ...	...	...	...	...	...	...	...	...	...	...	...		5	2	2	...	...	...	...	...	...	2	1	...	...	5	2	2	...	...	...	...	...	...	2	1
November ...	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...	...	2	2	...	...	...	...	...	...	...	...	...	2	2
December ...	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
												Total for 1900 ...														76	78	73	33	10	6	...	1	...	14	12
												Total for 1899 ...														80	1	1	1	...	5	...	...	...	34	26

V.—Port Observation Camp.

21. The area of land occupied by this camp from the date of its erection, *viz.*, 16th January 1899 up to 31st August 1900, was 25,090 square feet. On 1st September 1900 the land was curtailed to 17,296 square feet, as such a large space was not required owing to most of the persons rejected having been turned into the town. Among the outgoing passengers and crew, who were sent to the camp, 59 developed plague. They were transferred for treatment to the plague hospitals in the City. All the sheds in the camp were thoroughly disinfected twice a week with the standard solution of perchloride of mercury, and when a plague case was removed to a hospital the shed in which it developed was at once disinfected with a solution of perchloride of mercury and was not used for some time after. One hospital assistant, one ayah and one sweeper from the establishment of the camp. The services of the latter were not utilized, as the sweeping of the camp was carried out in accordance with arrangements made with the Public Health Department of the Bombay Municipality. One of the senior medical officers was detailed, in turn, every month to supervise the general working of the Camp.

22. Persons sent to the observation camp were kept there until their temperature fell to normal, or until it was certain that the symptoms from which they were suffering were not due to plague.

VI.—Harbour Patrol.

23. At the Marine Court of Enquiry held in Bombay on the 26th January 1900, Ramji Ganoo, tindal of the Muchwa "Khengty" belonging to Mr. Sidheshwar Bhaskar Fadke of Ratnágiri, stated that he left Mahul Bandar (which is outside the Bombay Harbour limits and in the Thána District) on the 24th January 1900, taking with him for Ratnágiri 7 crew and 23 passengers, none of whom were medically examined. This case is mentioned in order to show that plague, small-pox and other infectious diseases may easily be conveyed out of Bombay, or from places close to it, to coast and other ports.

24. In connection with this matter a further reference was made to Government, pointing out that people were in the habit of leaving infected places outside the Customs limits of the Bombay Harbour for Ratnágiri and other ports. Accordingly an order was issued by Government to the effect that vessels sailing from Mahul, Trombay, Thána, Panvel, Belápur and Uran and proceeding to coast and other ports should only be given port clearances to Bombay and the tindals to be informed that they will be required to call at Bombay for medical examination and to take out fresh port clearances to destination. Since the issue of this order all such vessels and their crew and passengers have been medically inspected on their departure from this port for their final destination.

25. The Harbour Police under the orders of the Commissioner of Police, and the Preventive Officers under the orders of the Superintendent of the Preventive Department, visited 559 Native Craft during the period the harbour patrol was carried on, *viz.*, from 1st January to 5th June 1900, and found 26 of them conveying out of the port persons who had not been inspected. The offending tindals were placed before the Presidency Magistrate and were fined sum of from Rs. 2 to Rs. 50 and some of them got from 18 days' to 2 months' rigorous imprisonment.

VII.—Disinfection of Ships and infected Cargo.

26. There were 122 infected vessels of all sorts disinfected during the year under the personal supervision of the Health Officer of the Port, or his Staff, assisted by the Harbour Police. Arrangements were made by the Resident Transport Officer and the Senior Naval Officer for carrying out the Port Health Officer's recommendations for the disinfection of Marine and Naval ships on which cases of infectious diseases occurred.

27. The Steam Ships "Bisagno," "Raffaelo Rubattino," "Domenico Balduino," "Okara" and "Rajah" landed at the Docks and at Carnac Bandar damaged cargo, *viz.*, 320 bags of grain called mug, a large quantity of potatoes, 6 bags of flour and 2 bundles of senna leaves. The Superintendents of Victoria and Prince's Docks, the Preventive Department, or the Agents of the vessels called upon the Port Health Officer to examine the damaged cargo. Accordingly Officers on the Port Health Staff were detailed from time to time to examine the cargo, who after examination condemned the articles in question and certified them to be either a nuisance or unfit for human consumption.

28. On six occasions mentioned below it was found to be absolutely necessary to disinfect infected cargo :—

(*a*) In March 1900, a khallasi died of small-pox on a cargo boat laden with 700 bags of ground nuts; 89 of the bags were suspected to have been infected by the small-pox patient lying on them. As the nuts were required for the manufacture of oil, they were disinfected in the Port Health Disinfecting Stove with the consent of the owner. Little or no damage was done to them from a commercial point of view.

(*b*) In May, two khallasis suffering from cholera were removed to the Arthur Road Hospital from Muchwa "Yeshwanty" (No. 5296) laden with 220 bags of rice. 29 of the bags were suspected to have been contaminated by the excreta of the patients. They were disinfected in the Disinfecting Stove before they were made over to the owner.

(*c*) In like manner 7 bags of rice landed from cargo boat No. 4594 were disinfected, as they were found to have been polluted by a cholera case which occurred on that boat.

(*d*) In June, 4 bags of turmeric, which were infected by a cholera patient on board the "Mageri Sakarkhady", were disinfected.

(*e*) In August, a fatal case of cholera occurred on boat No. 4778, which was laden with a cargo of soap stones, wheat flour, cumine seeds, and dal. 13 bags of wheat flour, 2 of cumine seeds and 11 of soap stones were marked off as having been possibly infected by the cholera discharge and were disinfected in the Port Health Disinfecting Stove.

(*f*) In October, 91 bags of rice, which were found to be infected by a cholera patient on board Cottia "Ruparell" No. 12, were disinfected.

VIII.—General Health of the Shipping.

29. During the year 916 persons connected with the shipping were admitted into the various hospitals in the City suffering from ordinary disease. The Saint George's Hospital admitted 614 Europeans, of whom 15 died ; the Jamsetjee Jijibhoy 83 Natives, of whom 4 died ; and the Goculdas Tejpal 219 Natives, of whom 23 died. The diseases were chiefly due to Ague, Beri Beri, Syphilis, Rheumatism, Diarrhœa, Cholera, Small-pox, Measles, Bronchitis, &c.

30. The Medical Inspector of the Royal Alfred Sailor's Home reported one case of plague, which occurred among the family of the Superintendent of the Home. There were no cases of any other infectious disease in the Sailor's Home.

31. The Coroner of Bombay held one inquest on a man who died from the effect of mephitic gas and twenty-one inquests on persons who died from accidents other than bilge-poisoning on board ships.

32. The man who died from the mephitic gas poisoning was a labourer on a steamer which entered dock on Thursday evening the 28th June 1900. On Friday the hatches were taken off and the man on entering the hold died from Asphyxia. Three other labourers on entering different holds in the same ship were reported to have become insensible, but were rescued before they died. These facts came to the Port Health Officer's notice accidentally at his inspection of the vessel on Sunday. The vessel had a cargo of rice and hides from Kobe, Penang, Sourabaya, Moulmein and Rangoon, and had met with bad weather during the voyage. The vessel was new and was surveyed both in London and Bombay as fit to carry cargo and passengers. At his inspection the Port Health Officer found that all the hold ventilators in front of the bridge had been removed and the places where they should have been were battened down with wooden-plugs and caps of canvas. The ventilators themselves were of the usual flimsy type seen on ships in the East and were incapable of standing any rough weather. Ships with ventilators made of material not sufficiently strong to stand rough weather are, as a rule, removed before leaving port in the monsoon season. If such a vesssl has a cargo of a foul nature or if the cargo ferments from any cause, noxious gases are generated and as there is no means of escape they are retained in the vessel with the result that if a person enters the hold as soon as the hatches are removed he would be likely to lose his life. This case was specially brought to the notice of the Bombay Port Trust and Government with a suggestion that it may be advisable to frame a bye-law making the Captain or Stevedore responsible for deaths and accidents due to mephitic gas on board of ship, or failing this, directing that all ventilators should be fitted and hatches removed and kept so for a certain number of hours before persons are allowed into the hold of a vessel in the monsoon season.

IX.—Red Sea Pilgrim Traffic.

33. During the year 987 pilgrims returned from Mecca *vid* Aden by vessels enumerated in the following table :—

Table No. 9.

Name of Ship.	Date of arrival.	Number of Crew.	Number of Pilgrims.	Number of passengers other than Pilgrims.	From what route the Pilgrims arrived.	Number of deaths during voyage.	Cause of death.	Number of cases of infectious diseases on board.	Nature of death.
S. S. "King Arthur".	13th January 1900.	64	58	...	Jeddah, *vid* Aden ...	...	.....	...	...
S. S. "Naderi" ...	11th May 1900 ...	70	448	...	Do. do. ...	5	Natural causes ...	1 case landed Aden.	of plague at
S. S. "Mozaffari"	4th July 1900 ...	68	429	8	Do. do. ...	2	1 death from Chronic Bronchitis and General Debility and 1 death from Phthisis and General Debility.	...	...
S. S. "Moshtari".	26th July 1900 ...	66	52	11	Do. do. ...	...	.....	...	...
Total for 1900 ...	.....	267	987	19	.....	7	.....	1 case landed Aden.	of plague at
Total for 1899 ...	.....	1,150	862	20	.....	5	.....	...	...

34. The S. S. "Naderi" with 448 pilgrims from Jeddah, which arrived in this harbour on the 11th of May 1900, landed a case of plague at Aden and had five deaths from natural causes during the voyage. According to the rules laid down regarding an infected pilgrim ship, all the pilgrims were kept under observation for 10 days before being allowed to proceed to their homes up-country and beyond the frontier. The well-to-do and influential persons, who travelled first class on the vessel, were allowed to pitch their own tents and use their own furniture in the Port Health Camp.

35. The baggage of all returning pilgrims was disinfected in the Port Health Disinfecting Stove. Pilgrims whose homes were up-country or beyond the frontier were not allowed to enter the town, but were sent direct from the ship to their homes by rail at the Government expense. The Pilgrim Traffic from Bombay to Jeddah has been stopped owing to the prevalence of plague in the former place since the year 1897; and consequently no vessels with Mecca Pilgrims left this Port for Jeddah during the year.

X.—Emigration Traffic.

36. There was no Emigration Traffic this year as it has been suspended since the year 1897, owing to the prevalence of plague in the City of Bombay.

XI.—Sanitary State of the Harbour and Foreshore.

37. Owing to the pressure of work the usual close inspection of the harbour and foreshore was not made during the year.

XII.—Epidemic of Cholera, Small-pox and Plague.

38. The following table gives by months the number of deaths from cholera, small-pox and plague in the City of Bombay during the year 1900:—

Table No. 10.

Diseases.	Number of Cholera, Small-pox and Plague deaths in the city of Bombay for the month of												Total Number of deaths from cholera, small-pox and plague during the year 1900.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Cholera	13	20	27	79	166	342	1,185	1,946	399	68	12	16	4,273
Small-pox	706	1,000	819	325	96	35	18	9	3	1	1	5	3,018
Plague	1,718	2,491	3,125	2,367	1,141	421	268	270	357	380	283	465	13,286

39. It will be seen from the above table that 20,577 persons are admitted to have died in the city from plague, cholera and small-pox during the year. Plague and small-pox existed in a virulent epidemic form from January to May inclusive, while cholera raged from June to September inclusive.

40. At the commencement of the outbreak of cholera in the City there were 19 deaths in the month of May among the crews of the Native Craft which lay at Malet, Carnac and Modi Basins. These craft bring vegetables, fruit and other fresh supplies for the Bombay market. Some of these basins are foul at low water as the Municipal sewers containing nightsoil, discharge into the Carnac and Modi Basins. Government ordered a bacteriological examination of water in these basins in their Resolution No. 3338, dated the 26th June 1900. Accordingly 12 samples of sea water from the Carnac Basin and Modi Bay were sent for analysis to the Director-in-Chief, Plague Research Laboratory, Government House, Parel. The result of the examination by Professor Haffkine has been reported to Government in this office letter No. 2429, dated the 19th September 1900. Professor Haffkine's opinion is quoted *verbatim*, as follows:—

"The two rather important features, viz:—

"(1) In the faculty of a peptom culture turning red when mixed with a strong acid

and (2) of a suspension of bacilli being clumped under the effect of the serum of an immunised animal. The comma bacilli cultivated from water samples Nos. 5 (Middle of Carnac Basin), 6 (Harbour end of Carnac Basin), and 11 and 12 (about 100 yards of sewer discharging into Modi Basin) showed themselves different from typical comma bacilli isolated from cholera patients.

They may thus be either degenerated cholera microbes having lost the above two faculties; or else micro-organisms belonging to the same tribe of comma shaped bacilli as the cholera microbes.

Our experience up to the present leads us to the conclusion that such non-cholera commas (?) are to be found only in places where cholera exists; and if they really belong to species in themselves harmless from the point of view of that disease, they at any rate indicate the presence of conditions favourable to the life and development of the cholera species of comma shaped bacilli.

A water or locality containing such microbes ought consequently to be pronounced dangerous to the surrounding inhabitants."

41. Nightsoil has now ceased to be discharged into the Basins and the Port Trust has arranged for the dredging of them.

42. The rigorous nature of the examination enforced on each individual who left this Port combined with the disinfection of the clothing and bedding of all Native crew and third class and deck passengers bound for ports out of India lessened to a considerable extent the number of suspiciously ill persons presenting themselves for medical examination owing to the fear of being detained. For this reason very few fully-developed plague cases were found at the time of inspection.

43. Whenever any of the crew or passengers who were prevented from sailing on a vessel bound for a Foreign Port developed plague, the fact was communicated to Government, with a view to telegraphic intimation being given to the authorities at the first port of call. In cases where plague occurred among persons prevented from sailing on vessels bound to an Indian Port, the fact was notified by the Port Health Officer to the next port at which the vessel was due to call.

44. With the exception of two, no lines of vessels that left Bombay met with any vexatious delay owing to quarantine regulations at Foreign Ports. This speaks volumes for the faith of Foreign Governments in the efficiency of the measures adopted by Government to prevent the spread of plague from Bombay by sea. The two exceptions were —

(*a*) Vessels of the British India Steam Navigation Company which gave up calling at Beira and Delagoa Bay owing to the stringent restrictions at these ports, and

(*b*) the owners of the Hall Line who report as follows:—

"Our ships have met with the usual detention at Marseilles and the authorities here have been more exacting than usual. In Galveston we learn that there has been considerable trouble in the case of vessels from India, for although they have had clean Bills of Health and no sickness on board, they have been compelled to discharge in quarantine at considerable extra expense, the authorities fearing the rats on board".

45. The following outgoing vessels were reported in the public press and otherwise to have had plague on board after leaving Bombay :—

(*a*) The occurrence of a suspected case of plague on the S.S. "Clyde," which left the Port of Bombay on the 17th January 1900 for Shanghai *via* Colombo, was announced by the *Ceylon Times* of the 21st idem. Referring to the Port Surgeon, Colombo, he reported that it was a case of pneumonia accompanied by extreme nervous depression quite out of proportion to the amount of lung affected. The patient was one of the crew, a Chinaman, who joined the ship at Bombay three days before sailing. The symptoms which set in a day before arrival at Colombo were high fever, great depression and delirium with pneumonia of the base of the right lung. No glandular complication was noticed at any time. The vessel was kept in strict quarantine while at Colombo, as the case was considered to be of a suspicious nature.

(*b*) A native coal trimmer on board the S.S. "King Arthur," which left Bombay on the 26th January 1900 for the Gulf, is said to have been attacked by plague during the voyage. At the time of departure he was, on medical examination at Bombay, found to be in good health. On the 29th idem he complained of slight fever and the next day he was very weak and with a temperature of 103°F. and furred tongue. A bubo appeared in the right groin that day. It was hard and tense. The ship on arrival at Bandar Abass, on the 1st February, was classed as infected and the landing of deck passengers was prohibited by the Port Authorities. The vessel left Bandar Abass for Bushire and on her arrival there on the 8th idem the case on inspection was diagnosed as one of plague by the Residency Surgeon and a Russian doctor of that place. The patient was then practically convalescent and the bubo, though large in size, was soft and appeared to be undergoing absorption. The "King Arthur" left on the 16th idem for Bussorah, where the patient was landed and the vessel disinfected by the local authorities. Ten days after disinfection the vessel left Bussorah on her return voyage to Bombay.

(*c*) The S.S. "Arabia," which left the Port of Bombay on the 5th May 1900, is said to have had a suspicious case of plague in the person of one of the native crew. On a reference to the President of the Alexandria Quarantine Board he reported that, on arrival of the ship at Suez on 13th May, the Surgeon of that vessel informed the Sanitary Authorities that one of the crew was sick with symptoms suspicious of plague. On a bacteriological examination by the Egyptian Authorities at Moses Wells Station, the case was proved to be one of malarial fever and not of plague. The patient was up the next day. The "Arabia" therefore had not plague on board as was reported.

(*d*) The S.S. "Egypt" left Bombay on the 9th June 1900 and eight passenger crew, whose kit had been disinfected, were transhipped from her to the "Rome" at Aden on or about the 14th idem. The "Rome" lay at Aden for four hours, during which time the mails and the eight men were transhipped direct from the "Egypt." The "Rome" passed her medical examination at Suez and Marseilles, and about a week after her arrival in London one of the eight men who were transhipped at Aden is reported to have developed plague. The "Rome" is said to have had on board wool and hides from Sydney. Both Sydney and Aden were at the time reported to be plague-infected. So far as can be ascertained by this office there is nothing to show how or where the man attacked contracted plague, nor is there anything on record to connect the case with Bombay,

except that the man came from Bombay a month before he fell ill on a vessel which had not been at Bombay, but had been at two other plague-infected ports.

46. The particulars of plague cases on incoming vessels are as follows:—

(*a*) One of Shepherd and Company's coasting steamers, the S.S. "Bahaduri," arrived at this port from Bhownagar in February 1900, with one case of plague among her passengers. It was removed to the Modikhana Hospital, and the ship and all the effects of her crew and passengers were thoroughly disinfected before the issue of pratique.

(*b*) The S. S. "Clyde" arrived in this harbour from Aden on 28th April 1900 with a case of plague among her passengers. The patient was removed to the Arthur Road Hospital, where he died the next day. There were two deaths from plague on this vessel during the voyage from Aden to Bombay. Aden was at the time plague-infected, and the people who had plague on the vessel were passengers from Aden. The vessel was thoroughly disinfected according to the Venice Sanitary Convention Rules before the issue of a pratique certificate.

(*c*) The S. S. "Bahaduri" arrived in May from Bhavnagar, a second time, with a plague case among her passengers. The case was a female, Vijbai Mohan, who was sent to the Parel Jain Hospital, where she died on the 8th May 1900. The vessel and effects of her crew were disinfected as usual.

(*d*) The S. S. "Naderi" arrived in Bombay on the 11th May 1900 with 448 pilgrims from Jeddah. The vessel landed a case of plague at Aden, and had five deaths due to natural causes between Jeddah and Bombay.

(*e*) The S. S. "Coromandel" left Bombay on the 11th April for Colombo, Penang Singapore, Hongkong and Shanghai. She arrived at Hongkong, a plague-infected port, on 27th April, where she remained for 26 hours, during which time the crew were allowed to go ashore. Among them was a waiter, who was said to have visited a house in which there had been four deaths from plague; but this statement could not be vouched for. The vessel left Hongkong on the 28th April, arrived at Sanghai on the 1st May, and after remaining there till 22nd idem, she obtained a clean Bill of Health and commenced her return voyage, during which there were four cases of plague—the first, that of the waiter above referred to; the second, another waiter; the third, a lascar, and the fourth, a lascar who died on the 29th May; after which date there were no more cases of plague. The first two cases occurred 40 days after leaving Bombay and 23 days after leaving Hongkong. The first two cases occupied a cabin in which dead and mummified rats were reported to have been found five days after the first of the two waiters was taken ill. There is nothing definite to show where and when the Europeans and Natives contracted plague. The incubation period is generally believed to be from 3 to 5 days, and if this be so, the plague could not have been contracted at Hongkong unless the crew brought the microbes from the shore on their clothing, etc. The plague might be due to rat-infection, as 17 dead rats were found from time to time in the store-room; but this was after the two saloon waiters had been affected. On arrival of the ship at Bombay all the casings in it were taken down and the whole ship washed with carbolic solution and fumigated with sulphur so as to get rid of the rats. A live rat from the vessel was examined, but no plague germs were found.

(*f*) The S. S. "Caledonia" arrived in this Port from London *viâ* Aden on the 14th July 1900 with a case of plague among her Postal crew. The patient embarked on the ship at Aden on the 9th idem and developed fever a few hours after departure of the steamer from Aden. He was removed to the Saint George's Hospital on his arrival at Bombay. The vessel was thoroughly disinfected before pratique was granted.

47. During the year 59 persons affected with plague were not permitted to sail on outgoing vessels; 14 persons, on inspection, were found to be plague-stricken on vessels and native craft in the harbour, docks and bandars; and 11 cases occurred on vessels on or before arrival at Bombay from other infected ports, making a total of 84 plague cases in connection with the harbour.

48. There is a falling off in the number of plague cases detected during the year as compared with previous years; but this is due to the fact that most of the rejections during 1900 were turned into the town and were, therefore, lost sight of, while in 1898 and 1899 the rejections were kept under observation for some time in a camp. In addition to the plague cases 85 cholera and 1,392 small-pox cases were detected during the time that these diseases raged in an epidemic form in Bombay. The majority of the cases were among native passengers, and were detected at the medical examinations which take place on shore prior to the embarkation of crew and passengers.

49. Plague has unfortunately broken out at foreign ports, but in no instance can the outbreak be traced to the crew or passengers on vessels from Bombay. The all-important question of infection by cargo or rats was carefully considered by the late Plague Commission, but no satisfactory conclusion was arrived at. The fact that plague has broken out at various ports only among people who worked cargo or who resided near the docks, would tend to show that the outbreaks were due to cargo or possibly rat-infection.

50. Plague in India continues to be of the bubonic type, and so long as it continues so, there is a probability that Foreign and European ports where the people wear boots or shoes will escape being attacked by a virulent and wide-spread epidemic of bubonic plague.

XIII.—Establishment.

51. The following extra staff has been sanctioned by Government in addition to the Health Officer of the Port of Bombay and his permanent establishment to carry out thoroughly the inspection of persons leaving and arriving at Bombay by sea:—

(*a*) Staff for Medical Examination Duties—

5 Medical Officers (Commissioned or English Doctors).
1 Lady Doctor.
1 Lady Nurse.
A Special Lady Doctor for the day when required.
2 Ayahs.
9 Medical Subordinates.
1 Medical Officer at Máhim and Worli Bandars.

(*b*) For the Observation Camp—

1 Medical Subordinate.
1 Ayah.
1 Sweeper or a general servant.

(*c*) For Disinfection work—

1 Medical Officer (English Doctor).
1 Medical Subordinate.
1 Engine Driver.
1 Fireman.
2 Coolies.
1 Ramoshi.

(*d*) Office—

3 Temporary Clerks.
1 Naik.
2 Temporary peons.

(*e*) Launch—

1 Tindal.
2 Lascars.
1 Engine Driver.
1 Stoker.
A special launch when required on days when work is heavy.
3 Tonics.

(*f*) Police—

1 Inspector.
8 European Constables.
50 Native Constables.

52. During the monsoon months, when the inspection work became light, a reduction in the sanctioned Medical Staff was made by transferring or dispensing with

1 English Doctor,
1 Medical Officer at Worli and Máhim Bandars,
1 Ayah, and
3 Medical Subordinates.

53. The thanks of the Port Health Officer and the Staff are due to the Superintendent, Preventive Department, for kindly placing one of the Customs launches at their disposal when the Port Health steam launch was laid up for cleaning purposes every fortnight and for repairs on other occasions, and also for rendering the usual assistance in carrying out the inspection work.

54. I have also to express my thanks to the Dock and Harbour Police for their assistance and co-operation.

55. The Medical Staff have performed their onerous and unpleasant duties very carefully and in a satisfactory manner. One of my Staff Assistant Surgeon, B. B. Mehta, contracted and died of plague in February 1901. He was an energetic and hard-working officer, and I regret his loss very much.

56. All the members of the Sanitary Police Force under the supervision of Inspector J. Wheatley and those of the Office Staff under Mr. Ramrao G. Kamalakar carried on their duties with credit to themselves and satisfaction to me. The steam launch crew have worked well and satisfactorily. Of the menial staff one permanent peon died of cholera, and of the launch crew a temporary lascar and an engine driver died of cholera and general debility, respectively.

57. I held charge from 1st January to 17th September, when I proceeded on two months' leave out of India. Captain Evans, M.B., I. M. S., acted as Port Health Officer during my absence. I again resumed charge of the Port Health Officer's duties on the 16th November 1900.

J. CRIMMIN, V.C., Major, I. M. S.,
Health Officer of the Port.

Bombay Port Health Office,
Town Customs House,
Dated 13th April 1901.

APPENDIX III.

The following table shows when the drainage and water-works were completed, and the average annual death-rate since the completion, and the average annual death-rate for the five-year period preceding the introduction and the ratio for rural circles and districts.

Name of District.	Táluka.	Town.	Date of completion of work of		Average annual death-rate since the introduction of drainage system or water-supply, or both.	Average annual death-rate for the five-year period preceding the introduction of drainage system or water-supply, or both.	Ratio of Rural Circle, excluding the towns for the year 1900.	Ratio for districts, excluding the towns for the year 1900.	Remarks.
			Drainage.	Water-supply.					
1	2	3	4	5	6	7	8	9	10
.....	.....	Bombay ...	1879*a*	1892*b*	44·77	Not available.	...	...	*a.* Drainage works commenced in 1879, though still in progress, are very far from complete.
Khándesh ...	Dhulia ...	Dhulia ...	...	1896	35·52	32·5	129·60	96·11	*b.* Thána Water-works completed in 1892. Besides this, there are Vehár and Tulsi Water Works.
Ahmednagar ...	Ahmednagar.	Ahmednagar.	...	... *c*	...	...	55·61	66·55	*c.* The improvement of water-supply of Wadgaon Aquiduct Works taken in hand during 1896-97.
Sholápur ...	Sholápur ...	Sholápur ...	...	1882	*45·35	38·33	56·97	48·04	*d.* Drainage system partially introduced.
Surat	Olpád ...	Surat ...	...	1898	44·56	39·77	79·79	85·69	*e.* Water-supply completed.
Ahmedabad ...	Daskrohi ...	Ahmedabad .	1893*d*	1891*e*	45·46	45·21	141·98	166·68	*f.* Since 1897 the death-rate rose on account of plague.
Karáchi ...	Karáchi ...	Karáchi ...	1895	1884	*47·56	35·15	30·23	36·93	*g.* In 1893 the gradient of the channel round the town was improved to carry away the sullage water that used to accumulate and stagnate round the town.
Hyderabad ...	Hyderabad .	Hyderabad...	...	1879	*36·14	...	27·07	28·95	
Shikárpur ...	Sukkur ...	Sukkur ...	...	1895*f*	30·14	28·70	26·97	24·96	
Thána	Sálsette ...	Thána ...	...	1881	*28·41	22·9	78·96	71·47	
.....	.....	Bándra ...	...	1896	...	23·1	...	71·47	
Kolába... ...	Alibág ...	Alibág ...	...	1876	*30·07	Not available.	39·53	53·28	
.....	Roha ...	Roha Ashtami.	...	1884	...	22·0	57·70	53·28	
.....	Panvel ...	Panvel ...	...	1895	36·48	19·5	59·51	53·28	
Poona	Mával ...	Talegaon Dabhade.	...	1887	...	80·8	47·02	47·47	
Sholápur ...	Pandharpur .	Pandharpur .	1882	1879	* 46·06	58·8	37·44	48·04	
Sátára	Sátára ...	Sátára ...	...	1886	*33·24	...	42·25	41·08	
Ratnágiri ...	Ratnágiri ...	Ratnágiri ...	...	1881	*22·35	No record	32·41	35·06	
.....	Rájápur ...	Rájápur ...	...	1878	...	Do. ...	28·88	35·06	
.....	Vengurl ...	Vengurla ...	...	1878	*35·47	20·*d*	...	35·06	
Dhárwár ...	Hubli ...	Hubli ...	...	1894	39·93	25·7	30·02	32·64	
Ahmedabad ...	Viramgaon .	Viramgaon...	1893*g*	...	...	69·26	168·31	166·68	
.....	Dholka ...	Dholka ...	1884	...	...	25·25	148·89	166·68	

* Average annual death-rate for 10 years ending 1900.

APPENDIX IV.

Military Works, Sanitary.

Station.	Actual cost in 1900.	Description of Military Works, Sanitary, undertaken during the year 1900.
1	2	
Poona District.		
Poona	258	Providing sinks and receptacles to cook-houses of married-men's. Patcherries, British Infantry Lines, Wanowree.
Do.	199	Providing five latrines for followers in British Infantry Barracks, Wanowree.
Do.	224	Providing latrines for followers of the British Infantry Lines, Ghorpuri.
Do.	224	Providing Dhobi's Ghat to the auxiliary hospital.
Do.	296	Providing corrugated iron screens to certain urinaries at the Hospital, Ghorpuri.
Ahmednagar ...	100	Fixing a wrought iron tank to the cook-house, British Infantry Lines in the Fort.
Do. ...	1,046	Erection of pump and tank at the well in the Fort.
Kirkee	176	Providing additional ventilation to the latrines of the Royal Artillery Lines and Hospital.
Do.	401	Providing cement pointed brick surface drains to Lascar's Lines, Gunpowder Factory, Sergeants' quarters and Station Hospital.
Do.	812	Providing the cook-houses of the Royal Artillery Barracks with perforated zinc self-closing doors and windows.
Do.	220	Providing raised sinks with iron receptacles for sullage water to the cook-houses of Royal Artillery Family Barracks.
Sátára	30	Providing Jhamps to the special ward in the Station Hospital, at Satara.
Do.	50	Renewing the murum floor in the rear apartment of the latrines in the European Infantry Barracks.
Do.	43	Removing the latrine in Native Infantry Hospital compound at Sátára to a new site.
Do.	77	Re-erecting the hut for infectious diseases in Native Infantry Hospital.
Do.	20	Erecting a chappar hut (diphtheria case) in British Infantry Lines.
Bombay District.		
Baroda	76	Clearing out wells and encamping grounds at Baroda, Miyagam and Itola.
Do.	86	Clearing the drainage.
Deoláli	70	Adding glazed earthen-ware troughs to urinaries of barracks.
Do.	201	Raising the pan platforms of all latrines, so as to fit the pans close under the seats.
Do.	130	Providing two semi-circular openings in the screen walls of all latrines.
Do.	360	Deepening wells Nos. 7 and 8.
Do.	2,210	Covering with corrugated sheet iron and fitting with pumps and service tanks to wells Nos. 3 and 8.
Do.	152	Providing spring and wire gauze doors to the hospital kitchens.
Do.	367	Providing light wooden frames covered with canvas over galvanized iron drinking water tanks.
Do.	412	Providing latrine seats for rest and standing lamps.
Khandála... ...	44	Providing ventilation to two barrack latrines.
Do.	99	Removing silt and debris from cantonment well.
Do.	253	Erecting a Larymore boiler and forming boiler room.
Do.	237	Repairs to Staff Sergeant's quarters.

APPENDIX IV—*continued.*

Station.	Actual cost in 1900.	Description of Military Works, Sanitary, undertaken during the year 1900.
1	2	3
Mhow District.		
Nasirabad ...	2,407	Special repairs to roofs and floors of No. 25 quarter Company Barrack, British Infantry Lines.
Do. ...	2,339	Making a well at Dilwara for drinking water for British Troops and a road leading up to it.
Do. ...	406	Special repairs to No. 5 Contagious Disease Hospital.
Do. ...	691	Special repairs to the roofs of Nos. 96 and 97 latrines, British Infantry Lines.
Do. ...	974	Providing boarded floors to the main and enclosed verandah rooms of the Gymnasium.
Do. ...	49	Making archways for ventilation to Hospital latrines.
Do. ...	104	Deepening the well in Native Infantry Hospital compound.
Do. ...	28	Providing additional windows to cook-house No. $\frac{50}{1-2}$.
Do. ...	309	Deepening wells in Royal Artillery Lines and Native Infantry Lines.
Do. ...	90	Remodelling sinks and receptacle stones of cook-houses in Royal Artillery Lines.
Do. ...	59	Deepening well No. 39 in British Infantry Lines.
Mhow	72	Improving ventilation of latrines and urinals in Royal Artillery Lines.
Do.	206	Improving cook-houses, British Troop Lines.
Do.	102	Improving ventilation of latrines and urinals, British Troop Lines.
Do.	137	Improving and altering British Infantry School.
Do.	107	Improving the ventilation of latrines and urinals of Station Hospital.
Do.	40	Raising the platforms of latrine seats, Royal Hospital Artillery and Royal Artillery Lines.
Do.	2,820	Providing moveable iron latrines in Native Infantry Lines.
Neemuch... ...	8	Improving the ventilation of latrine No. 19 by making holes and providing hooks in cook-houses, British Infantry Lines.
Do.	65	Improving the ventilation of end quarters of Royal Artillery Family Barracks by adding an extra window in each room and also improving the ventilation of the family latrines.
Do.	170	Wells Nos. 4, 3 and 22 have been covered in.
Do.	137	Constructing a temporary hut for cholera patients, Station Hospital.
Do.	122	Constructing a temporary hut for cholera patients in Native Cavalry Lines.
Do.	12	Improving the ventilation of latrines of family barracks in British Infantry Lines.
Do.	1,285	Providing self-closing doors to the cook-houses of the Station Hospital, British Infantry Barracks and Royal Artillery Lines.
Do.	154	Re-arranging the water cisterns in cook-houses of British Infantry and Royal Artillery Lines.
Do.	18,894	Introduction of improved system of conservancy in Bazar and Cantonment. Total cost Rs. 23,262.
Do.	11	Providing ventilation to the latrines and wash-house of the Garrison Cell.
Indore	3,064	Dismantling and re-constructing Pendals 11 and 12 of the Native Infantry Lines. Total cost Rs. 11,352.
Do.	1,042	Additions and alterations to the cook-house attached to the European Infantry Barracks.
Do.	1,219	Constructing iron moveable latrines for the Native Infantry Lines.

APPENDIX IV—*continued.*

Station.	Actual cost in 1900.	Description of Military Works, Sanitary, undertaken during the year 1900.
1	2	3
Mhow District—continued.		
Indore	96	Providing a trough urinal for the British Infantry Barracks.
Do.	109	Constructing one chupper shed for contageous disease for the Native Infantry Hospital.
Do.	122	Constructing one disinfecting boiler for the Station Hospital.
Do.	191	Laying stone-floor on the platform of well No. 3 in the Native Infantry Lines.
Do.	25	Dismantling old masonry latrines of the Native Infantry Lines.
Do.	67	Repairing and re-painting the ambulance cart of the Station Hospital.
Do.	84	Providing one iron moveable latrine of two seats for the Commissariat Agent's quarters at Indore.
Do.	297	Providing stone-floor and opening doors and windows in the room used by the Commissariat Agent in the old gun-shed, Indore.
Deesa District.		
Deesa	90	Providing self-closing doors with panels of wire-netting to cook-houses of Royal Artillery Barracks.
Do.	279	Providing self-closing doors with panels of wire-netting to cook-houses of European Infantry Barracks and Station Hospital.
Do.	336	Providing stone-flooring in cook-houses and in part of cash store of canteen, European Infantry Lines.
Do.	184	Making certain additions and improvements to Quarter Guard No. 47, European Infantry Lines.
Do.	127	Providing wire-netting to the windows of cook-houses in European Infantry Lines and in Station Hospital.
Do.	48	Providing roof ventilators in place of old ones in Staff Sergeants' Quarter No. 57, European Infantry Lines.
Do.	64	Supplying two moveable latrines of two seats each in place of permanent latrines in Native Infantry Lines.
Do.	47	Providing roof ventilator in sheep pen.
Do.	587	Fixing Larymore boilers for the use of British Troops.
Ahmedabad ...	36	Constructing a moveable iron latrine of three more seats (Deesa Pattern) for the syces of Royal Artillery.
Do. ...	58	Providing iron bars to windows in the Native Infantry Hospital.
Do. ...	17	Providing a water-pipe to bungalow No. 50, Barrack Department.
Do. ...	240	Providing three (one inch) Sismons' patent water meters to bungalows Nos. 5, 24 and 27.
Do. ...	770	Providing doors with wire gauge to the cook-houses of Barracks and Station Hospitals.
Do. ...	1,274	Providing water to the Bazar Camp.
Rajkot	177	Cleaning and repairing Military wells.
Do.	45	Providing a black stone gutter 65 feet long with iron receptacle at end at the rear of the Native Infantry latrines.
Do.	86	Providing a partition eye ward in the main ward of the Cavalry Hospital.
Mount Abu ...	73	Constructing a stone drain for storm water to Staff Sergeants' Quarter.
Do. ...	184	Erecting Larymore boiler for Abu Sanitarium.
Do. ...	228	Providing sliding trough to the urinals of the Sanitarium Barracks.
Do. ...	240	Supplying small filth receptacle, Bradley's pattern, to latrines, &c., Abu Sanitarium.
Do. ...	614	Providing self-closing doors, &c., to cook-houses of Regimental Buildings.

APPENDIX IV—*continued.*

Station.	Actual cost in 1900.	Description of Military Works, Sanitary, undertaken during the year 1900.
1	2	3
Nágpur District.		
Kampti and Sitabuldi	28,380	Re-roofing Staff Sergeants' quarters 10.
Do. ..	520	Providing moveable latrines for Native Establishment, British Infantry Lines.
Do. ..	500	Fitting new pumps to Royal Artillery and British Infantry wells.
Do. ..	.....	Re-roofing No. 89 Barrack, British Infantry Lines, in progress.
Do. ..	368	Erecting four Larymore boilers for British Infantry Troops.
Do. ..	1,015	Providing self-closing doors and perforated zinc to doors and windows to cook-houses for British Troops.
Do. ..	1,508	Re-modelling punkas on Mortimer frame system in certain quarters.
Do. ..	152	Erecting three urinaries in British Infantry Lines.
Do. ...	.....	Providing six new moveable latrines for women, Native Infantry Regiment, Kampti, in progress.
Do. ...	91	Erecting one Larymore boiler for British Infantry Troops.
Do. ..	753	Re-roofing wash-house and cook-room, British Infantry Lines.
Sind District.		
Karáchi	420	Special repairs to the floor-fitting in cess-pools and making new sinks to cook-houses of barracks in Napier Lines.
Do.	294	Improving the latrines of Karáchi Sub-division.
Do.	1,404	Substituting doors for windows in No. 8 Barrack, Somerset Lines.
Do.	85	Making new water-trough on the Segregation ground for animals.
Do.	1,214	Providing urinaries in the lines of British Troops.
Ghizree Sanitarium ..	1,901	Removal of shifting sand.
Do. ...	1,214	Supplying new urinals.
Do. ..	294	Latrines altered.
Aden—Steamer Point	3,159	Providing Horboury's pattern latrines to Royal Artillery Lines, Fort Morbut, Royal Artillery Lines and Followers' Lines.
Do. ..	205	Raising the seats of the latrines of British Infantry and Royal Artillery Lines and placing glazed earthen pans.
Aden	250	Infectious disease-shed for Station Hospital.
Do.	155	Incinerator for Station Hospital.
Do.	117	Providing copper boiler for Laundry Station Hospital.
Do.	210	Providing latrine for servants, Royal Artillery Mess.
Do.	70	Providing urinals to Royal Artillery Bar.
Do.	34	Providing meat-safes in cook-house, Fort Morbut.
Do. Crater ..	1,779	Filling catch-pits and giving surface drains to buildings Nos. 38, 43, 46, 48 and 52, Nos. 17, 18 and 19 married block and wash-houses Nos. 5, 6, 7 and 8.
Do.	670	Filling catch-pits and giving raised receptacles to Royal Artillery Lines and Station Hospital.
Do.	928	Surface drains, Native Infantry Lines.
Do.	667	Providing galvanized iron urinals behind barracks and bar, Royal Artillery and British Infantry Lines.
Do.	163	Ventilation of No. 60 latrine, British Infantry Lines.
Do.	89	Demolition of latrines Nos. 17 and 19, married men's barracks, British Infantry Lines.
Do.	213	Providing new latrines for Sergeants' Mess, British Infantry Lines.
Do.	1,534	New floor to No. 17, married men's barrack, British Infantry Lines.
Do.	105	Raising latrine seats, Royal Artillery and British Infantry Lines.
Do.	45	Ventilation of No. 29 latrine, British Infantry Lines.

APPENDIX V.

GENERAL POPULATION AND VITAL STATISTICS.

ANNUAL FORM No. I—*Showing the Births registered in the Districts of the Bombay Presidency during 1900.*

1	2	3			4			5			6	7	8	9		
No.	Districts.	POPULATION ACCORDING TO CENSUS OF 1891.			NUMBER OF BIRTHS REGISTERED.			RATIO OF BIRTHS PER 1,000 OF POPULATION.			Number of Males born to every 100 Females born.	Excess of Births over Deaths per 1,000 of Population.	Excess of Deaths over Births per 1,000 of Population.	MEAN RATIO OF BIRTHS PER 1,000 DURING PREVIOUS FIVE YEARS.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.				Male.	Female.	Total.
	Western Registration District.															
1	Khándesh	745,550	714,769	1,460,319	23,363	22,169	45,532	16·00	15·18	31·18	105·39	...	67·23	23·69	22·44	46·13
2	Násik	430,327	410,760	841,087	13,971	13,316	27,287	16·61	15·83	32·44	104·17	...	43·98	22·78	21·24	44 03
3	Thána	427,483	391,484	818,967	10,758	10,182	20,940	13·14	12·43	25·57	105·66	...	46·07	16·02	15·00	31·02
4	City of Bombay ...	507,681	298,463	806,144	6,411	6,022	12,433	7·95	7·47	15·42	106·56	...	82·31	12·57	19·49	15·13
5	Kolába	298,889	295,890	594,779	9,456	8,960	18,416	15·90	15·06	30·96	105·53	...	22·23	17·60	16·63	34·23
	Central Registration District.															
6	Ahmednagar	450,900	436,756	887,656	12,646	12,201	24,847	14·24	13·74	27·98	103·65	...	38·23	22·24	21·02	43·23
7	Poona	540,949	520,500	1,061,449	14,917	14,294	29,211	14·05	13·47	27·52	104·36	...	23·34	17·85	16·49	34 34
8	Sholápur	381,155	369,100	750,255	10,915	10,413	21,328	14·55	13·88	28·43	104·82	...	26·20	18·67	17·78	36·45
9	Sátára	613,501	612,010	1,225,511	17,888	16,719	34,607	14·60	13·64	28·24	106·99	...	13·25	17,96	17·00	34·96
10	Ratnágiri	513,581	592,281	1,105,862	15,039	13,869	28,908	13·60	12·54	26·14	108·43	...	9·22	16·23	15·25	31·48
	Southern Registration District.															
11	Belgaum	510,391	501,062	1,011,453	16,076	15,206	31,282	15·89	15 03	30·93	105·72	...	12·44	18·34	17·52	35·86
12	Dhárwár	527,632	522,901	1,050,533	19,473	18,598	38,071	18·54	17·70	36·24	104·70	3·69	...	19·34	18·75	38 09
13	Bijápur	398,070	398,216	796,286	12,194	11,667	23,861	15·31	14·65	29·97	104·51	...	1·93	17·13	16·49	33 62
14	Kánara	234,241	211,915	446,156	7,687	7,272	14,959	17·23	16·29	33·53	105·71	4·80	...	15·89	14·84	30 72
	Gujarát Registration District.															
15	Surat	321,541	328,283	649,824	10,457	9,849	20,306	16·09	15·16	31·25	106·17	...	48·59	20·16	19·35	39 51
16	Broach...	174,933	166,517	341,450	4,344	4,155	8,499	12·72	12·17	24·89	101·55	...	138·03	20·51	19·40	39·91
17	Kaira	460,566	410,963	871,529	8,059	7,009	15,068	9·25	8·04	17·29	114·98	...	131·15	19·74	17·53	37·27
18	Panch Mahális ...	162,073	151,308	313,381	2,951	2,725	5,676	9·41	8·70	18.11	108·29	...	262·95	20·03	19·03	39·06
19	Ahmedabad	472,977	447,951	920,928	9,267	8,374	17,641	10·06	9·09	19·15	110·68	...	153·88	17·57	15·99	33·56
	Sind Registration District.															
20	Karáchi	310,341	250,672	561,013	7,670	6.372	14,042	13·67	11·36	25·03	120·37	...	20·03	15·51	13·09	28·60
21	Hyderabad	480,522	403,514	883,836	9,713	7,351	17,064	1 ·99	1·29	22·28	132·13	...	11·31	10·53	7·84	18·37
22	Thar and Párkar ..	184,449	147,952	332,401	1,872	1,476	3,348	5 63	4·44	10·07	126·63	...	15·80	26 23	25·98	26·12
23	Shikárpur	493,603	421,455	915,058	14,879	12,422	27,301	16·25	13·59	29·84	119 78	3·84	...	16·14	13·40	29 54
24	Upper Sind Frontier...	96,231	78,238	174,469	2,831	2,204	5,035	16·23	12·63	28·86	128·45	3·45	...	16·70	12·92	29·62
	Total for the Presidency ...	9,737,366	9,082,960	18,820,346	262,837	242,825	505,662	13·97	12·90	26·87	108·24	...	43 ·9	34·82	34·53	34·68

ANNUAL FORM No. II.—*Statement of* BIRTHS *and* DEATHS *registered in the* DISTRICTS *of the* BOMBAY PRESIDENCY, *during the year 1900.*

1	2	3	4	5			6		7			8
Serial Number.	Districts.	Area in square miles.	Average population per square mile.	Population (Census, 1891).			Births.		Number of deaths Registered.			Number of deaths of males to every 100 deaths of females.
				Male.	Female.	Total.	Total number.	Birth-rate per 1,000 of population.	Male.	Female.	Total.	
	Western Registration District.											
1	Khándesh	9,974	146·	745,550	714,769	1,460,319	45,532	31·	75,395	66,323	141,708	113·
2	Násik	5,940	141·	430,327	410,760	841,087	27,287	32·	34,627	29,648	64,275	116·
3	Thána	3,583	228·	427,438	391,434	818,967	20,940	25·	31,066	27,604	58,670	112·
4	City of Bombay	22	36,642·	507,681	298,463	806,144	12,433	15·	45,087	33,725	78,812	133·
5	Kolába	2,164	274·	298,839	295,899	594,779	18,416	30·	16,379	15,261	31,640	107·
	Central Registration District.											
6	Ahmednagar	6,666	133·	450,900	436,756	887,656	24,847	27·	31,620	27,162	58,782	116·
7	Poona	5,348	198·	540,949	520,500	1,061,449	29,211	27·	28,547	25,437	53,984	112.
8	Sholápur	4,521	165·	381,155	369,100	750,255	21,328	28·	22,114	18,371	40,985	117·
9	Sátára	4,988	245·	613,501	612,010	1,225,511	34,607	28·	27,025	23,826	5 ,851	113·
10	Ratnágiri...	3,922	281·	513,581	592,281	1,105,862	28,908	26·	19,585	19,518	39,103	100·
	Southern Registration District.											
11	Belgaum	4,657	217·	510,391	501,062	1,011,453	31,282	30·	22,834	21,026	43,860	108·
12	Dhárwár	4,535	231·	527,632	522,901	1,050,533	38,071	36·	17,440	16,756	34,196	104·
13	Bijápur	5,757	138·	393,070	398,216	796,286	23,861	29	12,942	12,453	25,395	103·
14	Kánara	3,911	114·	234,241	211,915	445,156	14,959	33·	6,827	5,948	12,775	114·
	Gujarát Registration District.											
15	Surat	1,662	390·	321,541	328,283	649,824	20,306	31·	26,608	25,273	51,881	108·
16	Broach	1,453	235·	174,933	166,517	341,450	8,499	24·	29,101	26,834	55,935	108·
17	Kaira	1,609	541·	460,566	410,963	871,529	15,068	17·	71,620	57,747	129,367	124·
18	Panch Mahals	1,613	194·	162,073	151,308	313,381	5,676	18·	48,616	39,463	88,079	123·
19	Ahmedabad	3,921	241·	472,977	447,951	920,928	17,641	19·	83,919	75,433	159,352	111·
	Sind Registration District.											
20	Karáchi	14,115	39·	310,341	250,672	561,013	14,042	25·	14,187	11,094	25,281	127·
21	Hyderabad	8,469	104·	480,322	403,514	883,836	17,064	22·	15,006	12,057	27,063	124·
22	Thar and Párkar ...	13,200	25·	184,449	147,952	332,401	8,348	10·	10,666	7,907	18,573	134·
23	Shikárpur	9,277	98·	493,603	421,455	915,058	27,301	29·	12,678	11,105	23,783	114·
24	Upper Sind Frontier ...	2,863	60·	96,231	782,328	174,559	5,035	28·	2,396	2,037	4,433	112·
	Total for the Presidency	124,130	151·	9,737,386	9,082,960	18,820,346	505,662	26·	706,275	612,508	1,318,783	115·

1	2	9									10		
Serial Number.	Districts	Deaths per 1,000 of Population from									Mean Ratio of deaths per 1,000 during previous five years.		
		Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhœa.	Injuries.	All other causes.	All Causes.				
									Male.	Female.	Total.	Male.	Female.	Total.
	Western Registration District.													
1	Khándesh	13·93	0·96	...	40·63	26·19	0·29	15·03	101·11	92·79	97·03	38·24	35·57	36·94
2	Násik	11·43	0·21	1·69	25·86	15·17	0·30	21·76	80·47	72·18	76·42	44·75	42·46	43·63
3	Thána	22·57	1·26	2·59	26·74	4·71	0·60	13·27	72·67	70·51	71·64	32·44	31·91	32·19
4	City of Bombay	5·27	3·71	16·48	7·80	10·65	1·31	50·54	88·81	112·99	97·76	47·25	60·16	52·03
5	Kolába	13·57	1·27	0·24	19·83	6·53	0·37	11·39	54·79	51·57	53·20	31·36	29·75	30·56
	Central Registration District.													
6	Ahmednagar	6·94	0·13	0·16	16·90	27·26	0·35	14·48	70·13	62·19	66·22	36·29	33·52	34·93
7	Poona	7·27	0·51	4·80	16·97	12·13	0·38	8·81	52·77	48·87	50·86	40·75	38·85	39·72
8	Sholápur...	7·42	0·09	1·16	17·23	22·13	0·35	6·23	58·02	51·13	54·62	35·59	33·33	34·47
9	Sátára	9·69	0·19	0·35	7·51	8·53	0·36	14·95	44·05	38·93	41·49	38·21	36·56	37·38
10	Ratnágiri	5·56	1·01	0·26	17·00	6·83	0·41	4·28	38·13	32·95	35·35	25·75	21·93	23·71
	Southern Registration District.													
11	Belgaum	4·51	0·16	4·69	4·64	6·09	0·36	22·10	44·74	41·96	43·36	41·22	39·43	40·33
12	Dhárwár	0·75	0·18	3·69	8·28	2·31	0·36	19·16	33·05	32·04	32·55	40·97	39·92	40·45
13	Bijápur	2·40	0·19	0·22	7·66	5·87	0·27	15·27	32·51	31·27	31·89	31·81	30·49	31·14
14	Kánara	0·18	0·54	0·20	13·20	1·57	0·42	12·51	29·15	28·07	28·63	29·79	29·35	29·58
	Gujarát Registration District.													
15	Surat	0·50	0·09	0·45	40·07	4·47	0·50	23·76	82·75	76·99	79·84	35·17	33·45	34·30
16	Broach	15·95	0·01	...	89·66	17·07	0·47	40·66	166·36	161·14	163·82	37·38	37·07	37·23
17	Kaira	14·29	0·09	0·03	47·91	23·53	0·73	61·86	155·50	140·52	148·44	32·50	31·17	31·88
18	Panch Mahals	18·41	0·47	...	167·77	64·16	0·43	29·82	299·96	260·81	281·06	26·57	24·37	25·74
19	Ahmedabad	13·52	0·10	0·03	111·27	14·58	0·37	33·15	177·43	168·40	173·03	31·58	29·66	30·65
	Sind Registration District.													
20	Karáchi	8·12	0·48	4·36	21·23	1·20	0·43	9·18	45·71	44·26	45·06	25·70	25·55	25·60
21	Hyderabad	6·74	0·16	0·09	20·33	0·46	0·31	2·52	31·24	29·88	30·62	14·65	13·87	14·30
22	Thar and Párkar ...	11·18	0·02	...	43·33	0·35	0·25	0·75	59·83	58·44	55·88	19·21	19·80	19·47
23	Shikárpur	0·95	0·02	...	21·46	0·38	0·51	2·67	25·68	26·35	25·90	23·71	22·23	24·12
24	Upper Sind Frontier ...	1·45	0·09	...	22·69	0·04	0·36	0·79	24·90	26·04	25·42	20·63	21·70	21·11
	Total for the Presidency.	8·71	0·52	1·76	28·87	11·59	0·44	18·17	72·53	67·43	70·07	33·54	32·42	33·01

ANNUAL FORM No. III.—DEATHS *registered in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1900.*

1	2	3												4	5
No.	Districts.	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November	December.	Total, deaths registered during the year.	No.
	Western Registration District.														
1	Khándesh	8,016	9,390	16,871	19,695	9,319	9,219	16,852	19,093	14,460	8,591	5,778	4,224	141,708	1
2	Násik	3,225	3,064	4,812	8,728	5,456	6,106	8,955	8,435	5,680	4,194	2,877	2,743	64,275	2
3	Thána	2,890	2,793	3,396	3,298	4,694	13,502	9,508	7,051	4,105	2,807	2,213	2,413	58,670	3
4	City of Bombay	9,426	10,424	11,120	8,955	6,487	4,199	5,474	7,216	4,108	3,793	3,176	3,825	78,812	4
5	Kolába	1,888	1,702	1,865	1,672	1,791	3,790	6,358	5,413	2,285	1,464	1,406	1,986	31,040	5
	Central Registration District.														
6	Ahmednagar	3,693	3,668	5,111	7,332	7,682	5,974	7,984	6,927	4,075	2,743	2,275	1,918	59,782	6
7	Poona	2,946	2,425	3,028	3,031	3,995	5,283	7,994	7,598	5,950	5,531	3,358	2,815	53,984	7
8	Sholápur	2,683	2,697	2,731	3,458	5,308	4,600	6,582	4,552	3,359	2,223	1,503	1,399	40,985	8
9	Sátára	2,566	2,275	2,754	2,563	4,088	9,242	8,764	5,480	4,596	3,437	2,690	2,396	50,851	9
10	Ratnágiri	2,316	2,382	2,615	2,372	2,335	3,530	8,856	4,954	3,233	2,290	1,986	2,204	39,103	10
	Southern Registration District.														
11	Belgaum	2,275	2,140	2,687	2,589	2,879	4,921	4,525	4,990	4,916	4,497	4,021	3,420	43,860	11
12	Dhárwár	3,232	2,580	2,908	2,577	2,473	2,345	2,821	2,919	2,872	3,205	3,220	3,044	34,196	12
13	Bijápur	1,756	1,352	1,676	1,765	2,039	2,111	3,031	3,309	2,456	1,975	1,877	1,397	25,395	13
14	Kánara	1,182	961	1,214	961	949	905	1,143	1,114	1,116	1,022	1,069	1,139	12,775	14
	Gujarát Registration District.														
15	Surat	2,859	3,055	3,744	4,774	9,698	6,535	5,219	4,532	3,530	3,193	2,524	2,308	51,891	15
16	Broach	3,291	3,056	4,999	4,232	10,837	4,110	5,322	5,043	3,950	4,277	3,069	2,569	55,935	16
17	Kaira	7,474	6,966	10,521	13,191	19,327	10,255	13,164	13,649	11,292	10,452	7,780	5,303	129,367	17
18	Panch Mahals	3,003	3,943	5,857	5,599	16,943	9,982	13,303	11,345	6,219	4,096	3,009	1,781	88,079	18
19	Ahmedabad...	6,745	6,910	8,593	9,866	26,395	15,741	15,914	10,137	13,847	15,524	13,514	10,166	159,362	19
	Sind Registration District.														
20	Karáchi	1,725	1,411	1,854	3,038	1,909	1,200	1,263	3,546	2,309	2,154	2,650	2,222	25,281	20
21	Hyderabad	1,593	1,428	1,335	1,193	1,030	1,100	4,309	3,955	2,091	2,372	3,612	3,035	27,063	21
22	Thar and Párkar	1,384	1,404	1,213	926	838	1,876	2,931	1,852	1,014	1,386	1,704	1,495	18,573	22
23	Shikárpur	1,867	1,569	1,594	1,731	1,545	1,441	1,379	1,633	3,238	3,319	2,420	2,045	23,783	23
24	Upper Sind Frontier ...	343	283	332	295	325	303	274	285	495	656	469	393	4,433	24
	Total for the Presidency.	78,268	78,398	102,884	117,041	148,252	128,570	162,556	151,079	111,486	95,201	78,799	66,250	1,318,783	
	Ratio of deaths per 1,000 in each month... ...	4·16	4·17	5·47	6·22	7·87	6·83	8·64	8·03	5·92	5·06	4·18	3·52	70·07	

ANNUAL FORM No. IV.— DEATHS *registered according to* AGE *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during the year 1900.*

1	2	3		4		5		6		7		8		9		10		11		12		13
No.	Districts.	Under 1 year.		1 year and under 5.		5 and under 10.		10 and under 15.		15 and under 20.		20 and under 30.		30 and under 40.		40 and under 50.		50 and under 60.		60 and upwards.		No.
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
	Western Registration District.																					
1	Khándesh	9,960	9,521	15,647	15,535	8,127	6,931	3,879	3,217	2,055	2,205	5,838	5,662	7,341	5,863	7,103	4,449	6,020	3,860	9,416	9,080	1
2	Násik	4,766	4,331	6,423	6,309	2,896	2,630	1,459	1,212	1,100	1,164	3,671	3,230	4,070	2,819	3,557	2,194	2,993	2,088	3,702	3,662	2
3	Thána	2,791	2,449	3,688	3,842	2,759	2,607	1,672	1,458	1,357	1,411	3,927	4,429	4,883	3,930	4,099	2,430	2,844	2,005	2,847	3,043	3
4	City of Bombay	6,796	6,599	3,900	4,011	1,482	1,617	1,929	1,878	2,197	1,703	8,316	5,167	7,862	4,041	4,491	2,378	2,986	1,642	5,128	4,689	4
5	Kolába	2,109	1,843	2,478	2,462	1,396	1,328	846	685	570	608	1,696	1,920	1,917	1,801	1,837	1,231	1,579	1,153	1,951	2,230	5
	Central Registration District.																					
6	Ahmednagar	4,860	4,411	6,403	6,038	2,135	1,944	1,212	1,009	1,086	1,042	2,123	1,900	2,799	2,107	2,745	1,751	2,888	1,916	5,309	5,044	6
7	Poona	4,159	3,752	5,017	4,687	2,256	2,042	1,393	1,226	794	945	2,452	2,463	2,920	2,399	2,625	1,796	2,382	1,573	4,550	4,564	7
8	Sholápur	4,054	3,330	4,413	4,068	1,718	1,409	829	698	758	744	1,715	1,557	2,152	1,816	1,939	1,362	1,792	1,505	2,744	2,582	8
9	Sátára	3,658	3,191	4,235	4,175	2,143	1,889	1,195	923	829	879	2,215	2,230	2,695	2,132	2,776	1,794	2,891	2,068	4,388	4,539	9
10	Ratnágiri	2,194	2,039	2,409	2,305	1,169	1,222	670	649	765	812	1,620	2,023	2,116	2,183	2,067	1,687	2,220	1,605	4,375	4,993	10
	Southern Registration District.																					
11	Belgaum	2,722	2,366	4,072	4,137	1,878	1,893	1,200	1,102	666	557	1,804	1,817	2,254	1,876	2,259	1,508	2,033	1,216	3,946	4,534	11
12	Dhárwár	3,221	2,752	3,580	3,579	1,225	1,192	626	607	390	459	1,105	1,521	1,449	1,508	1,591	1,118	1,567	1,100	2,596	2,920	12
13	Bijápur	2,142	1,888	2,845	2,926	1,174	1,100	450	413	223	237	657	750	996	1,064	1,103	763	1,219	778	2,134	2,530	13
14	Kánara	1,472	1,262	558	612	232	256	194	179	199	225	678	774	850	627	935	547	800	515	903	921	14
	Gujarát Registration District.																					
15	Surat	3,141	2,916	4,404	4,629	2,184	2,005	1,141	1,025	796	797	2,233	2,601	2,892	2,815	2,977	2,130	2,649	1,928	4,191	4,427	15
16	Broach	2,621	2,474	5,634	5,531	2,591	2,429	1,250	1,010	877	664	2,971	2,822	3,531	3,241	3,503	2,590	3,073	2,376	3,050	3,697	16
17	Kaira	5,357	4,837	11,697	9,814	6,172	4,921	3,804	2,560	2,497	1,577	6,747	5,192	8,530	6,615	8,856	5,938	8,257	5,779	9,803	10,514	17
18	Panch Mahals	1,768	1,634	4,819	4,681	6,729	5,536	3,825	2,721	2,403	1,682	6,250	4,837	7,816	6,393	6,948	4,799	4,376	3,081	3,617	4,099	18
19	Ahmedabad...	6,486	6,225	15,042	14,103	7,621	6,857	5,017	3,927	3,701	2,972	9,702	8,211	11,007	9,985	10,289	8,277	7,816	6,650	7,053	8,691	19
	Sind Registration District.																					
20	Karáchi	2,144	2,064	1,928	2,056	1,153	988	811	565	636	471	1,926	1,405	1,805	1,141	1,214	694	924	491	1,614	1,219	20
21	Hyderabad	2,018	1,890	2,467	2,507	1,301	1,085	779	511	601	510	1,845	1,456	1,835	1,377	1,451	876	1,034	588	1,674	1,257	21
22	Thar and Párkar	855	927	1,600	1,444	1,019	803	685	408	543	319	1,274	878	1,221	851	1,133	617	920	595	1,416	1,065	22
23	Shikárpur	2,782	2,588	1,984	1,946	882	760	425	302	374	352	1,160	1,256	1,318	1,199	1,151	735	914	626	1,668	1,351	23
24	Upper Sind Frontier ...	594	478	372	339	170	135	81	61	79	83	168	200	223	227	191	147	180	101	338	265	24
	Total for the Presidency.	83,650	75,787	116,715	111,741	60,410	53,000	35,372	28,346	25,550	22,448	72,143	64,316	84,606	67,810	76,870	51,811	64,389	45,234	88,667	91,925	
	Ratios per 1,000 living...	243·08	222·60	108·54	100·43	44·33	42·37	34·45	35·70	32·94	32·30	41·85	38·12	57·49	52·40	79·22	59·44	111·62	83·72	209·08	185·94	

N. B.—Age of 1 male death in Hyderabad District could not be ascertained, hence the difference.

ANNUAL FORM No. V.

ANNUAL FORM No. V.—DEATHS *registered according to* CLASSES

1	2	3					
		POPULATION ACCORDING TO CENSUS OF 1891.					
No.	Districts.	Mahomedans.	Hindus.	Christians.	Pársis.	Other Classes.	Total.
	Western Registration District.						
1	Khándesh	112,049	1,260,341	642	508	86,779	1,460,319
2	Násik	42,059	784,713	1,188	407	12,720	841,087
3	Thána...	36,682	729,178	42,533	3,886	6,688	818,967
4	City of Bombay	155,247	568,516	29,712	47,458	5,211	806,144
5	Kolába	28,938	561,609	879	201	3,152	594,779
	Central Registration District.						
6	Ahmednagar	47,071	834,787	5,234	188	376	887,656
7	Poona	51,200	1,002,248	4,911	2,026	1,064	1,061,449
8	Sholápur	53,971	695,384	647	232	21	750,255
9	Sátára	43,256	1,181,540	425	134	156	1,225,511
10	Ratnágiri	79,673	1,021,997	4,142	15	35	1,105,862
	Southern Registration District.						
11	Belgaum	80,484	924,892	5,809	61	207	1,011,453
12	Dhárwár	131,000	915,898	3,441	135	59	1,050,533
13	Bijápur	88,522	706,957	774	24	9	796,286
14	Kánara	26,460	404,208	15,444	10	34	446,156
	Gujarát Registration District.						
15	Surat	52,307	584,348	375	12,757	37	649,824
16	Broach	71,263	248,998	88	3,273	17,828	341,450
17	Kaira	77,443	791,685	2,222	153	26	871,529
18	Panch Mahals	18,651	283,488	48	108	11,086	313,381
19	Ahmedabad	90,487	828,383	808	835	415	920,928
	Sind Registration District.						
20	Karáchi	453,188	100,646	2,447	1,408	3,324	561,013
21	Hyderabad	691,948	175,000	179	46	16,663	883,836
22	Thar and Párkar	185,942	91,301	8	1	55,149	332,401
23	Shikárpur	728,661	182,906	83	71	3,337	915,058
24	Upper Sind Frontier	155,408	18,606	50	8	397	174,469
	Total for the Presidency ...	3,501,910	14,897,629	122,089	73,945	224,773	18,820,346

in the DISTRICTS *of the* BOMBAY PRESIDENCY *during the year 1900.*

4						5					
NUMBER OF DEATHS REGISTERED.						RATIO OF DEATHS PER 1,000 OF POPULATION.					
Maho-medans.	Hindus.	Christians.	Pársis.	Other Classes.	Total.	Maho-medans.	Hindus.	Christians.	Pársis.	Other Classes.	Total.
6,720	134,927	16	12	33	141,708	59·97	107·05	24·92	23·62	0·38	97·03
2,695	61,511	48	5	16	64,275	64·08	78·39	40·04	12·28	1·25	76·42
2,447	54,143	1,916	106	58	58,670	66·71	74·25	45·05	27·28	8·67	71·64
15,891	58,695	2,090	1,785	351	78,812	102·37	103·24	70·34	37·61	67·35	97·76
1,325	30,226	30	2	57	31,640	45·79	53·82	34·13	9·95	18·08	53·20
2,765	55,801	119	6	91	58,782	58·74	11·54	22·74	31·91	242·02	66·22
2,463	50,348	556	53	564	53,984	48·11	50·24	113·22	26·16	530·08	50·86
2,764	38,129	68	2	22	40,985	51·21	54·83	105·10	8·62	1,047·62	54·62
1,717	49,028	11	2	93	50,851	39·69	41·49	25·88	14·93	596·15	41·49
3,318	35,684	101	...	...	39,103	41·65	34·92	24·38	...	...	35·35
3,756	39,876	221	...	7	43,860	46·67	43·11	38·04	16·89	33·82	43·36
4,063	30,021	96	2	14	34,196	30·94	32·78	27 90	14·81	237·28	32·55
2,753	22,612	24	1	5	25,395	31·10	32·00	31·01	41·67	555·56	31·89
762	11,711	301	...	1	12,775	28·79	28·97	19·49	...	29·41	28·63
2,786	48,635	64	396	...	51,881	53·26	83·23	170·67	31·04	...	79·84
9,618	46,118	22	177	...	55,935	134·85	185·21	250·00	54·08	...	163·82
8,683	120,348	327	2	7	129,367	112·12	152·02	147·16	13·07	269·23	148·44
1,343	86,730	6	...	...	88,079	72·01	305·94	125·00	...	...	281·06
10,865	148,094	327	47	19	159,352	120·07	178·77	404·70	56·29	45·73	173·03
18,469	6,408	71	45	288	25,281	40·75	63·67	29·02	31·96	86·64	45·06
18,778	8,040	6	...	239	27,063	27·14	45·94	33·52	...	14·34	30·62
7,679	8,403	...	...	2,491	18,573	41·30	92·04	...	...	45·17	55·88
17,317	6,307	5	...	154	23,783	23·75	34·48	60·24	...	46·15	25·99
3,685	716	2	...	30	4,433	23·71	38·48	41·00	...	75·57	25·42
152,662	1,152,511	6,427	2,643	4,540	1,318,783	43·59	77·36	52·64	35·74	20·20	70·07

ANNUAL FORM No. VI.—DEATHS *registered from* DIFFERENT CAUSES *in the*

1	2	3	4	5	6		7	8		
								Inju		
No.	Districts and Towns.	Population according to Census of 1891.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Suicide.		Wounding or Accident.
								Male.	Female.	
	A.—DISTRICTS.									
	Western Registration District.									
1	Khándesh	1,403,661	19,349	1,083	8	56,973	36,194	11	11	351
2	Násik	791,768	8,644	152	95	21,420	11,897	6	4	191
3	Thána	788,904	18,032	922	1,827	21,532	3,495	35	21	320
4	Kolába	571,607	7,736	648	136	11,635	3,686	7	2	168
	Central Registration District.									
5	Ahmednagar ...	837,162	5,581	44	132	14,688	23,646	6	7	239
6	Poona	890,004	6,811	218	609	16,238	10,754	4	...	318
7	Sholápur	648,186	3,873	47	262	10,798	13,317	4	...	191
8	Sátára	1,175,242	11,073	98	287	9,052	10,128	4	7	352
9	Ratnágiri	1,081,468	6,017	1,044	284	18,236	7,362	12	3	226
	Southern Registration District.									
10	Belgaum	949,856	4,357	115	3,112	4,410	6,689	23	57	229
11	Dhárwár	928,179	708	188	1,516	8,346	2,086	26	40	221
12	Bijápur	774,915	1,772	147	176	5,971	4,547	15	23	143
13	Kánara	420,928	82	212	92	5,670	672	6	11	141
	Gujarát Registration District.									
14	Surat	526,479	6,512	31	124	25,034	2,173	7	8	237
15	Broach	289,243	4,453	1	...	28,674	3,470	8	3	121
16	Kaira	805,420	9,511	8	23	38,045	15,074	15	12	536
17	Panch Mahals ...	285,755	4,991	44	...	45,066	14,353	3	3	105
18	Ahmedabad ...	726,832	10,349	31	9	87,307	9,324	7	20	187
	Sind Registration District.									
19	Karáchi	464,004	4,488	69	2,412	8,577	134	3	3	165
20	Hyderabad... ...	829,324	5,600	35	5	17,117	63	1	7	145
21	Thar and Párkar ...	328,703	3,510	5	...	13,384	116	4	...	53
22	Shikárpur	832,122	868	2	...	17,739	169	8	4	261
23	Upper Sind Frontier.	166,211	252	15	...	3,511	5	...	2	44
	Total of Districts...	16,515,973	144,569	5,159	11,109	489,423	179,354	215	248	4,944
	B.—TOWNS.									
	Khándesh District.									
1	Dhulia	21,871	302	185	...	1,028	352	...	...	6
2	Nandurbár... ...	7,670	381	93	...	1,107	1,247	...	...	2
3	Chopda	15,655	295	34	...	166	286	1	1	7
4	Nasirabad	11,462	29	...	...	44	173	...	...	...

DISTRICTS *and* TOWNS *of the* BOMBAY PRESIDENCY *during the year 1900.*

	9	10	11									12
RIES.			RATIO OF DEATHS PER 1,000 OF POPULATION.									
Snake-bite, or killed by wild beasts.	Total.	All other Causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Injuries.	All other causes.	From all Causes. For the year.	From all Causes. Mean of previous five years.	No.
36	409	20,897	134.913	13·78	0·77	...	40·59	25·78	0 29	14·88	96·11	36·94	1
17	218	16,841	59,267	10·92	0·19	0·12	27·05	15·03	0·27	21·27	74·85	42·83	2
93	469	10,110	56,387	22·86	1·17	2·32	27·30	4·43	0·59	12·81	71·47	31·85	3
30	207	6,406	30,454	13·53	1·13	0·24	20·35	6·45	0·36	11·20	53·28	30·47	4
32	284	11,343	55,718	6·66	0·05	0·16	17·55	28·24	0·34	13·55	66·55	33·75	5
40	362	7,258	42,250	7·65	0·25	0·68	18·25	12·08	0·41	8·15	47·47	39·10	6
10	205	2,635	31,137	5·98	0·07	0·40	16·66	20·54	0·32	4·07	48·04	31·61	7
54	417	17,221	48,276	9·42	0·08	0·24	7·70	8·62	0·36	14·65	41·08	37·03	8
202	443	4,531	37,917	5·56	0·97	0·26	16·86	6·81	0·41	4·19	35·06	23·56	9
32	341	20,870	39,894	4·59	0·12	3·27	4·65	7·04	0·36	21·97	42·00	39·25	10
34	321	17,135	30,300	0·76	0·20	1·63	8·99	2·25	0·35	18·46	32·64	40·51	11
20	201	11,532	24,346	2·29	0·19	0·23	7·70	5·87	0·26	14·88	31·42	30·82	12
19	177	5,208	12,113	0·19	0·50	0·22	13·48	1·59	0·42	12·37	28·78	30·03	13
21	273	10,968	45,115	12·37	0·06	0·23	47·55	4·11	0·52	20·84	85·69	32·45	14
11	143	9,433	46,174	15·40	...	...	99·14	12·00	0·50	32·61	159·65	37·09	15
23	586	40,477	112,724	11·80	0·01	0·03	47·24	18·72	0·73	61·43	139·96	31·28	16
17	128	7,909	72,491	17·47	0·15	...	157·71	50·22	0·45	27·68	253·68	24·15	17
32	246	13,878	121,144	14·24	0·04	0·01	120·12	12·83	0·34	19·10	166·68	27·44	18
42	213	1,241	17,134	9·66	0·15	5·20	18·50	0·28	0·46	2·67	36·93	25·60	19
93	246	945	24,011	6·75	0·04	0·01	20·64	0·08	0·30	1·14	28·95	14·30	20
24	81	248	17,344	10·68	0·02	...	40·71	0·35	0·25	·75	52·76	19·47	21
139	412	758	19,948	1·07	0·02	...	21·72	0·21	0·51	·03	24·46	24·12	22
14	60	66	3,909	1·52	0·09	...	21·12	0·04	0·36	·38	23·52	21·11	23
1,035	6,442	246,910	1,082,966	8·75	0·31	0·67	29·63	10·86	0·40	14·95	65·57	30·99	
...	6	228	2,101	13·81	8·46	...	47·00	16·09	0·27	10·42	96·05	34·98	1
...	2	217	3,047	49·67	12·13	...	144·33	162·58	0·26	28·29	397·26	44·07	2
...	9	390	1,180	18·84	2·17	...	10·60	18·27	0·58	24·91	75·37	39·15	3
...	...	221	467	2·53	...	...	3·83	15·05	...	19·23	40·64	32·71	4

FORM No.

1	2	3	4	5	6		7	8		
								Inju		
No.	Districts and Towns.	Population according to Census of 1891.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Suicide.		Wounding or Accident.
								Male.	Female.	
	B.—TOWNS—*continued.*									
	Násik District.									
5	Násik	24,406	628	17	1,224	144	343	1	...	22
6	Yeola	18,861	229	1	101	114	498	...	...	7
7	Deoláli Cantonment.	2,293	11	2	...	6	1	1	...	2
8	Málegaon do. ..	3,769	100	5	...	63	23	...	...	2
	Thána District.									
9	Thána	17,455	264	63	118	224	276	2	...	10
10	Kalyán	12,608	184	45	101	142	88	2	...	5
11	City of Bombay ...	806,144	4,246	2,993	13,285	7,900	8,583	66	36	955
	Kolába District.									
12	Panvel	10,417	33	69	2	67	112	...	...	7
13	Alibág	5,886	120	26	1	19	35	...	...	2
14	Mahád	6,869	180	23	1	70	47	...	...	2
	Ahmednagar District.									
15	Ahmednagar ...	36,031	418	51	14	220	433	2	1	18
16	Sangamner... ...	9,733	151	20	1	85	112	...	...	2
17	Ahmednagar Cantonment.	4,730	12	1	...	6	3	...	...	...
	Poona District.									
18	Poona	118,657	835	313	4,325	1,449	1,887	1	...	22
19	Junnar	11,905	7	1	...	176	102	1	...	2
20	Poona Cantonment .	31,134	44	8	146	105	94	1	...	8
21	Kirkee do. ...	9,749	17	3	6	47	41	...	...	3
	Sholápur District.									
22	Sholápur	61,564	781	17	615	1,053	1,572	1	...	38
23	Bársi	20,552	462	2	...	776	1,416	1	...	13
24	Pandharpur ...	19,953	452	4	...	298	301	...	...	4
	Sátára District.									
25	Sátára	25,748	249	7	131	67	214	2	2	2
26	Karád	12,085	246	...	5	10	33	1	...	12
27	Wái	12,436	311	18	1	74	84	1	...	3
	Ratnágiri District.									
28	Vengurla	10,121	23	6	3	310	96	...	...	9
29	Ratnágiri	14,274	111	67	...	259	92	...	...	2

VI—*continued.*

		9	10	11								12
BIES.				Ratio of Deaths per 1,000 of Population.								
Snake-bite, or killed by wild beasts.	Total.	All other causes.	Total deaths from all causes.	Cholera	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Injuries.	All other causes.	From all causes. For the year.	From all causes. Mean of previous five years.	No.
...	23	850	3,229	25·73	0·70	50·15	5·90	14·05	0·94	34·83	132·30	76·00	5
1	8	458	1,409	12·14	0·05	5·36	6·05	26·40	0·42	24·28	74·70	37·33	6
...	3	25	48	4·80	0·87	...	2·62	0·44	1·31	10·90	20·93	31·39	7
...	2	129	322	26·53	1·32	...	16·71	6·10	0·53	34·23	85·43	40·97	8
...	12	488	1,445	15·12	3·61	6·76	12·83	15·81	0·68	27·96	82·78	40·39	9
1	8	270	838	14·59	3·57	8·01	11·26	6·98	0·63	21·41	66·47	42·12	10
2	1,059	40,746	78,812	5·27	3·71	16·48	9·80	10·65	1·31	50·54	97·76	52·81	11
2	9	145	437	3·17	6·62	0·19	6·43	10·75	0·87	13·92	41·95	36·18	12
...	2	113	316	20·39	4·42	0·17	3·24	5·94	1·34	19·19	53·69	38·40	13
...	2	110	433	26·20	3·35	0·14	10·20	6·84	0·29	16·01	63·04	23·58	14
1	22	1,210	2,368	11·60	1·42	0·39	6·10	12·02	0·61	33·58	65·72	60·14	15
...	2	267	638	15·51	2·05	0·10	8·73	11·51	0·21	27·43	65·55	46·23	16
...	...	36	58	2·54	0·21	...	1·27	0·63	0·00	7·61	12·26	23·46	17
...	23	1,409	10,241	7·04	2·64	36·45	12·21	15·90	0·19	11·88	86·31	60·29	18
2	5	126	417	0·59	0·09	...	14·78	8·57	0·42	10·58	35·03	33·85	19
1	10	461	868	1·41	0·26	4·69	3·37	3·02	0·32	14·81	27·88	37·99	20
...	3	91	208	1·74	0·31	0·62	4·82	4·21	0·31	9·33	21·34	36·59	21
1	40	1,155	5,233	12·69	0·28	9·99	17·10	25·54	0·65	18·75	85·00	33·01	22
...	14	325	2,995	22·48	0·10	...	37·76	68·90	0·68	15·81	145·73	46·61	23
...	4	561	1,620	22·65	0·20	...	14·94	15·08	0·20	28·12	81·19	52·57	24
...	6	566	1,240	9·67	0·27	5·09	2·60	8·31	0·23	21·98	48·15	38·53	25
1	14	215	523	20·36	0·00	0·41	0·83	2·73	1·16	17·79	43·28	66·61	26
...	4	320	812	25·01	1·45	0·08	5·95	6·75	0·32	25·73	65·29	41·01	27
...	9	122	569	2·27	0·59	0·29	30·63	9·49	0·89	12·05	56·22	37·15	28
1	3	85	617	7·78	4·69	...	18·14	6·45	0·21	5·95	43·22	25·01	29

FORM No.

1	2	3	4	5	6		7	8		
								Inju		
No.	Districts and Towns.	Population according to Census of 1891.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Suicide.		Wounding or Accident.
								Male.	Female.	
	B.—TOWNS—*continued.*									
	Belgaum District.									
30	Belgaum	28,342	102	18	1,247	10	14	1	2	6
31	Gokák	12,106	6	...	52	89	156	...	...	6
32	Athni	10,416	94	26	1	90	103	1	1	5
33	Belgaum Cantonment.	10,733	1	7	235	98	17	...	...	2
	Dhárwár District.									
34	Dhárwár	32,583	47	1	41	123	79	2	3	22
35	Hubli	52,194	23	...	8	133	177	1	...	14
36	Gadag-Bettigeri ...	23,821	15	...	15	57	68	...	1	8
37	Ránebennur ...	13,756	...	...	101	35	21	1	2	3
	Bijápur District.									
38	Bijápur	16,749	138	8	2	95	92	1	2	9
39	Kaladgi	4,622	...	...	...	37	32	...	...	1
	Kánara District.									
40	Kárwár	14,515	...	30	...	128	10	1	...	4
41	Kumta	10,713	...	...	...	92	19	...	...	4
	Surat District.									
42	Surat	108,631	156	23	45	885	558	5	...	31
43	Bulsár	14,714	154	6	128	117	174	...	1	10
	Broach District.									
44	Broach	40,137	766	...	...	1,017	2,063	1	...	14
45	Jambusar	12,070	227	1	...	892	297	...	...	4
	Kaira District.									
46	Kaira	10,101	338	...	...	461	84	...	...	5
47	Nadiád	29,044	574	...	...	1,695	1,473	4	3	29
48	Borsad	12,159	1,543	62	...	469	1,122	2	...	1
49	Kapadvanj	14,805	487	4	1	1,089	2,755	...	...	2
	Panch Mahálsl District.									
50	Godhra	14,601	215	55	...	3,740	1,906	...	...	...
51	Dohad	12,935	564	49	...	3,769	3,849	...	...	5
	Ahmedabad District.									
52	Ahmedabad ...	144,192	870	53	22	11,563	1,479	3	1	66
53	Gogha	6,637	474	3	...	564	268	1	...	3
54	Viramgám	23,197	540	1	...	1,929	822	...	...	3
55	Dholka	16,494	190	...	...	1,040	1,539	2	2	4
56	Ahmedabad Cantonment.	3,576	30	...	...	73	...	...	...	...

VI—*continued.*

		9	10	11								12
BIES.				Ratio of Deaths per 1,000 of Population.								
Snake-bite, or killed by wild beasts.	Total.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Injuries.	All other causes.	From all causes. For the year.	From all causes. Mean of previous five years.	No.
...	9	834	2,234	3·59	0·64	43·99	0·35	0·49	0·32	29·43	78·82	65 94	30
1	7	230	540	0·49	...	4·30	7·35	12·89	0·58	18·99	44·61	48·24	31
...	7	245	656	9·02	2·49	0·09	8·64	18·53	0·67	23·52	62·98	46·47	32
1	3	175	536	0·09	0·65	21·90	9 13	1·58	0·28	16·30	49·94	53·29	33
...	27	742	1,060	1·44	0·03	1·26	3 77	2·42	0·83	22·77	32·53	40·67	34
2	17	1,199	1,557	0·44	...	0·15	2·55	3·39	0 33	22·97	29·83	43·28	35
...	9	725	889	0·64	...	0·63	2·40	2·85	0·38	30·44	37·32	38·03	36
...	6	227	390	...	...	7·34	2·55	1 53	0·44	16·50	28 35	29·29	37
...	12	557	904	8·24	0·48	0·12	5·67	5·49	0·72	33·25	53·97	39·94	38
...	1	75	145	...	...	...	8·01	6·92	0·22	16·23	31·38	32·89	39
...	5	176	349	...	2·07	...	8·82	0·69	0·34	12·13	24·04	20·46	40
...	4	198	513	...	...	...	8·59	1·77	0·37	18·48	29·22	24·18	41
2	38	4,076	5,781	1·44	0·21	0·41	8 15	5·14	0·35	37·52	53·22	41·87	42
1	12	394	985	10·47	0·41	8 70	7·95	11·82	0·82	26·77	66·94	44·45	43
...	15	3,916	7,807	19·08	...	...	26·09	5·40	0·37	97·57	194·51	39·28	44
...	4	533	1,954	18·81	0·08	...	73·90	24·61	0·33	44·16	161·89	33·70	45
...	5	471	1,359	33·46	...	...	45·64	8·32	0·49	46·63	134·54	30·98	46
1	37	1,550	5,329	19·76	..	...	58·36	50·72	1·27	53·37	183·48	43 00	47
...	3	1,182	4,381	126·90	5 10	...	38·57	92·28	0·25	97·21	360·31	43·62	48
...	2	1,236	5,574	32·89	0 27	...	73·62	186·09	0·13	83·49	376·40	33·50	49
...	...	868	6,784	14·6	3·74	...	254·58	129·74	...	59·08	461·78	47·89	50
...	5	568	8,804	43·60	3·79	...	291·38	297·56	0·33	43·91	680·63	35·75	51
14	84	13,511	27,582	6·03	0·37	0·15	80·13	16·26	0·58	93·70	191·29	45·56	52
...	4	210	1,523	71·42	0·45	...	84·98	40·38	0·60	31 64	229·47	32·30	53
...	3	1,553	4,818	23·28	0·04	...	83 15	35·44	0·13	66·95	208·99	38·54	54
1	9	1,369	4,147	11·5	...	...	63·05	93·31	0·54	83·00	251·42	33·99	55
...	...	5	108	8·39	...	...	20·41	...	...	1·40	30·20	12·64	56

FORM No.

1	2	3	4	5	6		7	8		
								Inju		
No.	Districts and Towns.	Population according to Census of 1891.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Suicide.		Wounding or Accident.
								Male.	Female.	
	B.—TOWNS—*concluded.*									
	Karáchi District.									
57	Karáchi	97,009	68	202	34	3,334	542	4	2	50
	Hyderabad District.									
58	Hyderabad ...	54,512	361	103	75	845	356	3	...	26
	Thar and Párkar District.									
59	Umarkot	3,698	206	...	...	1,019	...	...	1	1
	Shikárpur District.									
60	Shikárpur	41,991	1	...	...	797	88	3	...	11
61	Sukkur	28,935	8	...	...	573	81	1	...	35
62	Lárkhána	120,010	...	...	...	531	9	...	1	5
	Upper Sind Frontier District.									
63	Jacobabad	8,258	1	...	...	448	2	...	...	2
	Totals of Towns ...	2,304,373	19,320	4,726	22,087	53,896	38,889	121	62	1,558
	Total for the Presidency ...	18,820,346	163,889	9,885	33,196	543,319	218,243	336	310	6,502

VI—*concluded.*

		9	10	11									12
RIES.				Ratio of Deaths per 1,000 of Population.									
ake-bite, or killed by wild beasts.	Total.	All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhœa.	Injuries.	All other causes.	From all causes.		No.
											For the year.	Mean of previous five years.	
1	57	3,910	8,147	0·70	2·08	0·35	31·37	5·59	0·59	40·31	83·98	60·74	57
1	30	1,282	3,052	6·62	1·89	1·38	15·50	6·53	0·53	23·52	55·99	37·72	58
1	3	1	1,229	55·71	...	...	275·55	...	0·81	0·27	332·34	75·79	59
1	15	1,163	2,064	0·02	...	...	18·98	2·10	0·36	27·69	49·15	36·63	60
1	37	434	1,133	0·28	...	...	19·80	2·80	1·28	15·00	39·16	30·10	61
...	6	92	638	...	...	...	44·21	0·75	0·50	7·66	53·12	16·65	62
...	2	71	524	0·12	...	...	54·25	0·24	0·24	8·60	63·45	35·24	63
41	1,782	95,117	235,817	8·40	2·05	9·59	23·40	16·88	0·77	41·23	102·33	47·42	...
1,076	8,224	342,027	1,318,783	8·71	0·52	1·76	28·87	11·59	0·44	18·17	70·07	33·01	...

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ANNUAL FORM No. VII—DEATHS *registered from* CHOLERA *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1900.*

1	2	3		4		5												6			7			8	9
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.														Total.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 of previous five years.	No.
		Number in each District.	Number from which deaths from Cholera were reported.	Number in each District.	Number from which deaths from Cholera were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.		
	Western Registration District.																								
1	Khándesh	25	25	2,828	985	352	562	4,459	8,260	919	961	3,231	1,488	123	1	...	...	10,836	9,520	20,356	14·73	13·22	13·94	0·88	1
2	Násik	16	16	1,617	463	...	...	919	2,908	1,042	1,316	2,388	971	67	1	...	...	5,143	4,469	9,612	11·95	10·88	11·39	1·25	2
3	Thána	11	11	1,626	780	...	...	...	5	984	8,998	5,764	2,474	297	18	...	...	9,254	9,226	18,480	21·64	23·57	22·66	0·92	3
4	City of Bombay ...	1	1	1	1	13	20	27	79	166	341	1,171	1,935	398	68	12	16	2,628	1,618	4,246	5·17	5·42	5·27	0·51	4
5	Kolába	11	11	1,466	389	...	...	...	...	132	1,934	3,637	2,124	218	29	...	...	4,928	4,141	8,069	13·47	13·66	13·57	1·40	5
	Central Registration District.																								
6	Ahmednagar	14	14	1,346	388	...	...	...	1,336	1,912	743	1,317	742	169	3	...	...	3,215	2,947	6,162	7·13	6·75	6·94	1·69	6
7	Poona	12	12	1,191	424	...	...	...	2	615	1,893	3,108	1,763	290	30	1	3	4,169	3,544	7,714	7·71	6·81	7·27	3·00	7
8	Sholápur	10	10	716	266	...	1	...	455	1,311	1,176	2,212	269	106	33	5	...	3,472	2,496	5,968	8·06	6·76	7·42	1·70	8
9	Sátára	15	15	1,316	575	...	...	...	31	1,135	5,445	4,172	758	307	31	...	...	6,454	5,425	11,879	10·52	8·86	9·69	2·63	9
10	Ratnágiri	10	10	1,310	364	...	...	...	...	13	661	4,178	949	208	69	...	13	2,841	3,307	6,151	5·51	5·58	5·56	0·17	10
	Southern Registration District.																								
11	Belgaum	11	11	1,076	201	...	...	...	...	320	2,124	874	695	250	172	119	96	2,409	2,151	4,560	4·72	4·29	4·51	3·91	11
12	Dhárwár	17	15	1,303	77	2	2	4	...	1	10	75	120	68	144	196	171	432	361	793	0·82	0·69	0·75	1·89	12
13	Bijápur	10	9	1,112	125	21	...	...	5	48	131	974	460	89	42	96	44	985	925	1,910	2·47	2·32	2·40	2·99	13
14	Kánara	13	2	1,185	11	...	...	...	...	...	...	...	32	1	...	17	32	47	35	82	0·20	0·16	0·16	0·36	14
	Gujarát Registration District.																								
15	Surat	10	10	795	348	...	...	...	652	3,494	1,620	584	178	83	41	...	...	3,282	3,540	6,822	10·21	10·79	10·50	0·32	15
16	Broach	8	8	403	294	...	...	...	2	3,934	475	731	255	48	1	...	...	2,833	2,613	5,446	10·20	15·69	15·95	0·10	16
17	Kaira	11	11	579	293	...	...	...	1,120	6,151	1,664	2,358	1,066	141	3	...	...	6,761	5,692	12,453	14·68	13·85	14·29	0·22	17
18	Panch Mahals ...	7	7	654	213	...	...	...	195	3,317	716	862	652	28	...	...	...	3,175	2,595	5,770	19·59	17·15	18·41	0·29	18
19	Ahmedabad	12	12	852	314	...	...	...	36	7,577	2,313	1,524	984	218	1	...	...	6,488	5,964	12,453	13·72	13·32	13·52	0·38	19
	Sind Registration District.																								
20	Karáchi	15	15	792	695	...	...	...	...	...	...	310	2,200	767	452	720	107	2,695	1,861	4,556	8·68	7·42	8·12	0·12	20
21	Hyderabad	13	13	1,251	876	...	...	...	...	...	59	3,105	2,372	358	23	38	6	3,567	2,394	5,961	7·41	5·93	6·71	0·02	21
22	Thar and Párkar ...	9	9	309	309	...	...	...	...	48	905	1,945	746	72	...	...	...	2,207	1,599	3,716	11·97	10·20	11·18	0·03	22
23	Shikárpur	17	9	1,106	152	...	...	...	...	...	...	...	1	40	559	273	4	...	567	310	877	1·03	0·88	0·95	...	23
24	Upper Sind Frontier ...	5	3	295	61	...	...	...	...	...	...	...	...	...	94	152	7	...	130	128	258	1·35	1·57	1·45	...	24
	Total for the Presidency.	283	259	95,193	8,519	388	585	5,409	15,086	32,929	33,625	44,521	23,123	4,024	1,496	1,215	488	87,101	76,728	163,889	8·05	8·45	8·71	1·75	

ANNUAL FORM No. VIII—DEATHS *registered from* SMALL-POX *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1900.*

2	3		4		5												6			7		8			9	10
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.														Total.			NUMBER OF THESE DEATHS AMONG CHILDREN.		TOTAL RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 of previous five years.	No.
		Number in each District.	Number from which deaths from Small-pox were reported.	Number in each District.	Number from which deaths from Small-pox were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Under 1 year.	1 to 10 years.	Male.	Female.	Total.		
	Western Registration District.																										
1	Khándesh	25	23	2,828	301	102	280	362	303	127	87	52	23	7	8	20	25	723	672	1,395	341	708	0·97	0·94	0·95	0·50	1
2	Násik	16	15	1,617	52	2	15	49	40	15	18	8	6	5	3	6	4	103	74	177	55	101	0·24	0·18	0·21	0·33	2
3	Thána	11	11	1,626	249	170	286	243	180	93	34	5	3	2	2	7	5	531	499	1,030	262	565	1·24	1·28	1·26	0·17	3
4	City of Bombay ...	1	1	1	1	701	992	814	320	95	34	18	9	3	1	1	5	1,666	1,327	2,993	1,034	859	3·28	4·44	3·71	0·37	4
5	Kolába	11	11	1,466	217	99	104	154	139	101	78	49	13	4	5	9	20	368	398	766	246	370	1·23	1·34	1·29	0·30	5
	Central Registration District.																										
6	Ahmednagar	14	10	1,348	13	8	19	26	29	9	5	1	...	3	3	2	11	56	60	116	35	25	0·12	0·14	0·13	0·10	6
7	Poona	13	12	1,191	115	28	62	108	82	94	48	48	27	5	11	7	23	277	266	543	217	276	0·51	0·51	0·51	0·10	7
8	Sholápur	10	8	716	22	13	12	14	11	3	1	4	1	1	3	5	2	36	34	70	15	10	0·01	0·09	0·09	0·12	8
9	Sátára	15	13	1,346	35	10	8	7	9	14	14	3	6	7	1	11	33	66	67	123	48	57	0·09	0·11	0·10	0·03	9
10	Ratnágiri	10	10	1,310	360	25	54	119	156	198	151	119	61	49	43	63	79	554	563	1,117	287	533	1·08	0·95	1·01	0·08	10
	Southern Registration District.																										
11	Belgaum	11	9	1,076	31	12	14	13	24	16	11	12	9	7	1	5	42	92	74	166	48	63	0·18	0·15	0·16	0·14	11
12	Dhárwár	17	10	1,303	75	15	11	13	20	16	22	13	12	8	10	12	37	102	87	189	44	73	0·22	0·17	0·18	0·19	12
13	Bijapur	10	9	1,112	56	31	20	23	31	10	13	7	4	1	6	4	5	64	91	155	48	61	0·16	0·23	0·19	0·12	13
14	Kanara	13	9	1,185	42	16	14	26	39	26	20	20	17	20	7	14	23	118	124	242	41	50	0·50	0·59	0·54	0·21	14
	Gujarát Registration District.																										
15	Surat	10	6	795	12	...	...	8	25	15	7	1	1	2	...	...	1	34	26	60	17	38	0·11	0·08	0·09	0·19	15
16	Broach	8	2	403	1	...	...	1	...	1	...	...	...	...	...	...	...	1	1	2	1	...	0·01	0·01	0·01	0·30	16
17	Kaira	11	6	579	6	...	2	...	21	18	32	1	...	...	...	...	...	47	27	74	...	20	0·10	0·07	0·09	0·16	17
18	Panch Mahals	7	7	654	18	20	17	35	45	22	1	6	...	2	...	...	...	72	76	148	32	61	0·44	0·50	0·47	0·19	18
19	Ahmedabad	12	9	852	13	2	1	11	34	31	7	1	1	...	...	...	...	53	35	88	19	46	0·11	0·08	0·10	0·9	19
	Sind Registration District.																										
20	Karáchi	15	8	792	29	21	31	42	51	78	30	4	7	1	...	...	6	170	101	271	34	62	0·55	0·40	0·48	0·17	20
21	Hyderabad	13	6	1,251	11	...	...	...	1	5	4	2	2	7	3	32	52	59	79	138	30	96	0·12	0·20	0·16	0·10	21
22	Thar and Párkar ...	9	1	309	1	...	...	...	...	...	4	...	...	...	...	...	...	3	2	5	1	...	0·02	0·01	0·02	0·33	22
23	Shikárpur	17	2	1,106	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·11	23
24	Upper Sind Frontier ...	5	2	295	6	...	9	2	...	1	1	...	...	...	...	...	...	1	1	2	...	1	...	...	...	...	24
	Total for the Presidency.	283	200	25,191	1,908	1,266	1,951	2,070	1566	988	622	374	202	134	107	201	104	5,198	4,687	9,885	2,853	4,073	0·53	0·52	0·52	0·12	

ANNUAL FORM No. IX—DEATHS *registered from* FEVERS *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1900.*

1	2	3		4		5												6			7			8	9
Number.	Districts.	Circles of Registration.		Villages.														Total.			Ratio of Deaths per 1,000 of Population.			Mean ratio per 1,000 for previous five years.	Number.
		Number in each District.	Number from which deaths from fevers were reported.	Number in each District.	Number from which deaths from fevers were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.		
	Western Registration District.																								
1	Khándesh	25	25	2,828	2,828	3,800	4,153	5,554	5,756	3,993	3,863	5,824	7,89·	7,342	5,011	3,627	2,502	31,177	28,141	59,318	41·82	39·37	40·63	22·70	1
2	Násik	16	16	1,647	1,568	1,336	1,041	1,380	2,032	1,605	1,928	2,793	3,121	2,206	1,525	1,346	1,479	11,859	9,888	21,747	27·56	24·07	25·86	23·28	2
3	Thána	11	11	1,626	1,567	1,556	1,403	1,830	1,631	1,815	2,201	1,914	2,400	2,241	1,740	1,485	1,674	11,847	10,051	21,898	27·74	25·67	26·74	21·42	3
4	City of Bombay ...	1	1	1	1	914	979	1,161	1,017	691	542	406	476	469	401	414	430	4,717	3,183	7,900	9·49	10·68	9·89	17·19	4
5	Kolába	11	11	1,466	1,365	952	894	973	857	765	774	1,029	1,491	1,017	820	695	1,414	6,108	5,683	11,791	20·44	19·21	19·83	17·97	5
	Central Registration District.																								
6	Ahmednagar ...	14	14	1,348	1,341	509	541	777	1,412	1,923	1,673	2,011	1,848	1,247	1,028	1,082	948	7,934	7,035	14,969	17·63	16·18	16·90	15·99	6
7	Poona	12	12	1,191	1,164	990	865	1,313	1,308	1,444	1,519	2,198	2,287	1,927	1,450	1,238	1,476	9,351	8,064	18,015	17·29	16·69	16·97	21·75	7
8	Sholápur	10	10	716	701	934	975	1,103	1,178	1,563	1,490	1,248	1,379	988	816	585	636	6,796	6,129	12,925	17·86	16·61	17·23	20·21	8
9	Sátára	15	15	1,316	1,141	437	372	553	466	586	886	1,224	1,007	958	987	853	874	4,952	4,251	9,203	8·07	6·94	7·51	20·55	9
10	Ratnágiri	10	10	1,310	1,297	1,272	1,178	1,434	1,426	1,358	1,519	2,459	2,373	1,809	1,335	1,223	1,419	9,282	9,523	18,805	13·07	16·08	17·00	13·90	10
	Southern Registration District.																								
11	Belgaum	11	11	1,076	748	193	204	355	312	275	336	438	541	374	423	644	567	2,514	2,183	4,697	4·92	4·35	4·64	13·31	11
12	Dhárwár	17	17	1,303	1,133	897	705	856	770	623	542	609	601	646	654	921	865	4,506	4,188	8,694	8·54	8·01	8·28	19·11	12
13	Bijápur	10	10	1,112	965	223	173	310	378	475	520	713	797	609	625	736	544	3,126	2,977	6,103	7·86	7·48	7·66	14·43	13
14	Kánara	13	13	1,185	1,040	616	444	690	441	456	416	535	471	455	441	484	501	3,083	2,807	5,890	13·16	13·24	13·20	15·31	14
	Gujarát Registration District.																								
15	Surat	10	10	795	773	1,451	1,530	1,931	2,206	3,570	2,850	2,709	2,621	2,084	1,942	1,605	1,383	13,512	12,524	26,036	42·02	38·14	40·07	21·96	15
16	Broach	8	8	403	389	1,804	1,912	2,634	2,338	4,082	2,345	2,614	2,862	2,445	3,091	2,715	1,771	15,695	14,018	30,613	89·72	89·59	89·66	27·31	14
17	Kaira	11	11	579	576	1,799	1,859	3,198	3,205	4,127	3,028	4,017	4,694	4,036	4,789	4,097	3,000	22,562	19,197	41,759	43·99	46·71	47·91	19·49	17
18	Panch Mahás ...	7	7	654	653	2,290	2,661	3,932	4,174	7,899	6,032	7,041	6,605	4,373	3,256	2,654	1,538	28,939	23,636	52,575	178·56	156·21	167·77	22·51	18
19	Ahmedabad ...	12	12	852	852	4,188	3,844	5,906	5,947	12,236	8,959	9,867	10,299	9,746	12,270	11,421	8,793	53,369	49,107	102,476	112·83	109·63	111·27	23·24	19
	Sind Registration District.																								
20	Karáchi	15	15	792	792	949	722	697	600	624	634	644	1,060	1,195	1,456	1,649	1,781	6,325	5,586	11,911	20·38	22·23	21·23	17·94	20
21	Hyderabad ...	13	13	1,251	1,251	1,305	1,205	1,031	943	812	817	923	1,256	1,467	2,152	3,326	2,724	9,750	8,212	17,962	20·30	20·35	20·33	12·40	21
22	Thar and Párkar...	9	9	309	309	1,860	1,351	1,186	891	746	903	964	1,086	902	1,359	1,636	1,469	8,211	6,192	14,403	41·61	41·85	43·33	17·87	22
23	Shikárpur... ...	17	17	1,106	1,106	1,490	1,281	1,266	1,405	1,303	1,213	1,160	1,345	2,350	2,761	2,209	1,866	10,386	9,254	19,640	21·04	21·96	21·49	19·32	23
24	Upper Sind Frontier	5	5	295	295	324	260	320	283	319	287	236	267	359	491	442	371	2,144	1,815	3,959	23·32	23·20	22·89	19·63	24
	Total for the Presidency ...	283	283	25,191	23,863	32,089	30,558	39,360	40,969	53,295	45,304	53,650	58,633	51,245	50,928	47,328	40,060	288,145	255,174	543,319	29·59	28·09	28·87	18·96	

ANNUAL FORM No. IX-A.—DEATHS *registered from* PLAGUE *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1900.*

1	2	3		4		5												6			7			8	9
Number.	Districts.	Circles of Registration.		Villages.														Total.			Ratio of Deaths per 1,000 of Population.			Mean ratio per 1,000 for previous four years.	Number.
		Number in each District.	Number from which deaths from Plague were reported.	Number in each District.	Number from which deaths from Plague were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.		
	Western Registration District.																								
1	Khándesh	25	3	2,828	4	1	3	2	...	...	...	...	...	1	1	...	...	2	6	8	...	...	...	0·16	1
2	Násik	16	11	1,647	27	26	56	35	2	...	...	...	30	373	756	131	11	752	668	1,420	1·75	1·62	1·69	3·41	2
3	Thána	11	9	1,626	51	142	181	300	397	243	34	32	123	249	173	76	96	1,263	783	2,046	2·86	2·00	2·50	3·61	3
4	City of Bombay ...	1	1	1	1	1,718	2,491	3,125	2,367	1,141	421	263	270	357	330	283	464	9,237	4,048	13,285	18·19	13·56	16·48	14·28	4
5	Kolába...	11	9	1,466	35	45	11	13	14	23	4	...	...	5	10	...	15	85	55	140	0·29	0·19	0·24	1·21	5
	Central Registration District.																								
6	Ahmednagar	14	7	1,348	7	43	30	31	31	...	...	...	1	6	4	1	...	77	70	147	0·17	0·16	0·16	0·96	6
7	Poona	12	11	1,191	83	109	34	49	12	1	...	3	150	1,373	2,353	836	266	2,700	2,296	5,086	5·16	4·41	4·89	6·91	7
8	Sholápur	10	5	716	21	566	208	101	2	...	...	...	...	...	...	...	...	503	374	877	1·32	1·01	1·16	1·90	8
9	Sátára	15	14	1,346	54	144	91	70	32	8	...	...	...	5	15	23	36	223	201	424	0·36	0·33	0·35	5·24	9
10	Ratnágiri	10	9	1,310	51	56	45	106	62	12	3	...	...	...	3	...	...	172	115	287	0·33	0·20	0·26	0·23	10
	Southern Registration District.																								
11	Belgaum	11	11	1,076	89	225	149	101	67	18	7	32	203	1,114	1,205	964	562	2,419	2,228	4,647	4·74	4·44	4·60	7·29	11
12	Dhárwár	17	15	1,303	73	375	210	166	35	...	1	...	1	188	380	190	135	854	627	1,481	1·62	1·56	1·60	8·89	12
13	Bijápur	10	6	1,112	25	128	48	2	...	...	...	...	...	...	...	...	...	113	65	178	0·23	0·16	0·22	1·29	13
14	Kánara	13	2	1,185	6	2	..	...	1	...	3	3	9	25	26	18	5	43	44	92	0·20	0·21	0·20	0·27	14
	Gujarát Registration District.																								
15	Surat	10	7	795	15	51	33	26	12	4	1	13	36	55	39	21	16	141	156	297	0·44	0·47	0·45	2·80	15
16	Broach...	8	...	403	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·98	16
17	Kaira	11	3	579	2	5	8	7	3	3	...	...	...	...	...	...	...	21	3	24	0·04	0·01	0·03	0·55	17
18	Panch Mahális... ...	7	...	654	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·71	18
19	Ahmedabad	12	1	852	2	...	...	...	...	14	14	1	1	...	...	1	...	20	11	31	0·05	0·03	0·03	0·04	19
	Sind Registration District.																								
20	Karáchi	15	5	792	16	57	64	451	1,436	405	33	...	...	...	...	...	...	1,687	759	2,446	5·27	3·03	4·36	3·90	20
21	Hyderabad	13	2	1,251	3	2	12	46	18	2	...	...	...	...	...	...	...	49	31	80	0·10	0·08	0·09	0·40	21
22	Thar and Párkar ...	9	...	309	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	22
23	Shikárpur	17	...	1,106	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·20	23
24	Upper Sind Frontier.	5	...	295	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·01	24
	Total for the Presidency ...	283	131	25,191	565	3,695	3,659	4,681	4,491	1,877	531	352	824	3,651	5,345	2,544	1,606	20,456	12,740	33,196	2·10	1·40	1·76	3·03	

ANNUAL FORM No. X.—DEATHS *registered from* DYSENTERY *and* DIARRHŒA *in the* DISTRICTS *of the* BOMBAY PRESIDENCY *during each month of the year 1900.*

1	2	3		4		5												6			7			8	
Number.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	Number.
		Number in each District.	Number from which Deaths from Dysentery and Diarrhœa were reported.	Number in each District.	Number from which Deaths from Dysentery and Diarrhœa were reported.													Male.	Female.	Total.	Male.	Female.	Total.		
	Western Registration District.																								
1	Khándesh ...	25	25	2,828	2,626	2,253	2,659	4,044	3,532	2,557	2,850	5,214	6,552	4,762	2,005	1,019	805	20,916	17,336	38,252	28·05	24·25	26·19	5·40	1
2	Násik	16	16	1,647	1,190	731	865	1,114	1,431	1,050	1,318	1,496	1,791	1,309	707	509	441	7,081	5,681	12,762	16·45	13·83	15·17	6·29	2
3	Thána	11	11	1,628	826	200	145	203	222	411	592	570	701	416	175	118	106	2,175	1,684	3,859	5·09	4·30	4·71	1·81	3
4	City of Bombay...	1	1	1	1	924	992	1,095	1,034	832	525	608	880	572	436	333	352	5,089	3,494	8,583	10·02	11·70	10·65	3·81	4
5	Kolába	11	11	1,466	861	185	164	153	151	219	321	823	1,023	427	159	118	132	2,142	1,738	3,880	7·16	5·87	6·53	3·42	5
	Central Registration District.																								
6	Ahmednagar ...	14	14	1,348	1,296	647	1,323	2,311	2,921	3,327	2,607	3,535	3,152	1,896	1,182	747	546	13,357	10,837	24,194	29·62	24·81	27·26	4·71	6
7	Poona	12	12	1,191	973	691	663	785	889	1,044	1,066	1,702	2,208	1,664	1,005	670	491	7,025	5,853	12,878	12·99	11·24	12·13	5·36	7
8	Sholápur	10	10	716	635	386	1,011	1,109	1,405	1,927	1,546	2,534	2,284	1,906	1,093	497	408	9,214	7,392	16,606	24·17	20·03	22·13	7·01	8
9	Sátára	15	15	1,346	989	473	431	587	565	801	1,124	1,442	1,591	1,416	976	597	456	5,727	4,732	10,459	9·34	7·73	8·53	5·21	9
10	Ratnágiri ...	10	10	1,310	1,131	375	438	429	368	305	729	1,684	1,205	769	447	362	349	3,969	3,581	7,550	7·73	6·05	6·83	3·43	10
	Southern Registration District.																								
11	Belgaum	11	11	1,076	766	269	269	333	364	508	646	921	1,119	945	757	496	442	3,573	3,496	7,06	7·000	6·78	6·99	5·36	11
12	Dhárwár ...	17	17	1,303	546	142	127	173	136	163	227	295	309	283	223	192	166	1,265	1,166	2,431	2·39	2·23	2·31	2·15	12
13	Bijápur	10	10	1,112	808	247	205	266	264	344	402	671	776	638	408	267	183	2,363	2,308	4,671	5·93	5·79	5·87	4·11	13
14	Kánara	13	13	1,185	235	51	44	52	31	44	44	63	101	74	70	54	73	393	308	701	1·68	1·47	1·57	2·01	14
	Gujarát Registration District.																								
15	Surat	10	10	795	322	102	148	252	397	545	267	339	346	253	140	63	53	1,510	1,395	2,905	4·69	4·25	4·47	0·66	15
16	Broach	8	8	403	256	388	596	919	685	1,087	332	621	506	322	209	106	59	3,177	2,653	5,830	18·16	15·93	17·07	0·52	16
17	Kaira	11	11	579	516	1,052	1,383	2,835	3,530	2,059	1,187	1,708	2,056	1,992	1,473	821	412	11,765	8,743	20,508	25·54	21·27	23·53	0·50	17
18	Panch Mahális ...	7	7	654	451	252	547	1,278	2,023	4,300	2,443	4,049	3,087	1,306	469	220	125	11,067	9,041	20,108	68·28	59·75	64·16	0·12	18
19	Ahmedabad ...	12	11	852	374	532	473	639	1,018	2,467	1,605	1,879	1,683	1,388	993	460	290	7,183	6,249	13,432	15·19	13·95	14·58	0·48	19
	Sind Registration District.																								
20	Karáchi	15	14	792	30	63	44	64	169	115	75	36	20	33	19	12	26	372	304	676	1·29	1·20	1·28	0·45	20
21	Hyderabad ...	13	11	1,251	27	46	30	37	32	36	27	25	32	42	25	41	46	235	184	419	0·49	0·46	0·49	0·23	21
22	Thar and Párkar.	9	7	309	32	2	27	7	17	13	10	35	...	2	1	...	2	66	50	116	0·36	0·34	0·35	0·09	22
23	Shikárpur ...	17	15	1,106	41	34	23	41	28	43	17	9	12	46	34	30	31	210	137	347	0·43	0·33	0·38	0·18	23
24	Upper Sind Frontier.	5	4	295	6	1	...	...	...	...	1	2	...	2	...	1	...	3	4	7	0·03	0·05	0·04	·005	24
	Total for the Presidency ...	283	274	25,191	14,988	10,546	12,611	18,726	21,212	24,301	19,961	30,251	31,439	22,463	13,006	7,733	5,994	119,877	98,366	2,18,243	12·31	10·83	11·59	3·07	

Annual Reports.—

Annual Report of the Sanitary Commissioner for the Government of Bombay for the year 1900.

General Department.
No. 5174

Bombay Castle,
6th September 1901.

Letter from the Sanitary Commissioner for the Government of Bombay, No. B.—2968, dated the 24th July 1901—

Submitting the Annual Report of his Department for the year 1900.

Memorandum from the Sanitary Commissioner for the Government of Bombay, No. B.—2969, dated the 24th July 1901.

Letter from the Sanitary Commissioner for the Government of Bombay, No. B.—3006, dated the 26th July 1901:—

"In continuation of my letter No. B.—2968 of 24th July 1901, forwarding the Annual Sanitary Report for the year 1900, I have the honour to state that I have omitted to mention the names of two officers who were appointed by Government to assist me.

"The following paragraph was sent but too late for insertion on page 46 of Section X of the Report:—

'Assistant Surgeon Dadina was appointed to assist the Sanitary Commissioner from 28th March to 31st July 1900 and Major Jennings, I.M.S., also worked with the Sanitary Commissioner from 14th June to 2nd October 1900. This officer was of great assistance and rendered much help during the short time he was in the office.'"

RESOLUTION.—According to the records of the Sanitary Department the population of the Presidency based on the census of 1891 should, at the beginning of 1901, have been 18,615,497. The census taken in March last showed it to be 18,524,640. The similarity of these totals—which disclose a difference of ·48 per cent. only—would be a matter of gratification were it not that the details, when examined, make it clear that the similarity is fortuitous and cannot be regarded as evidence of any great accuracy in the registration of vital statistics. In the City of Bombay and throughout the whole of Sind the census totals are largely in excess of those derived from the registration records, while the opposite is the case in Khándesh, Ahmednagar, Sátára, Bijápur, Kaira and other districts. In Bombay the difference amounts to 22·4 per cent. of the census population of 1891. This very considerable excess is no doubt due partly to immigration from famine districts, but must be largely ascribed also to defective registration of births—a feature in the Municipal Administration of the City of Bombay which is far from satisfactory. The Sind figures testify to the partial, and, to some extent, unavoidable, failure of the registration system in that Province which has already on more than one occasion been the subject of comment by the Sanitary Commissioner and Government and has been recently referred for the special consideration of the Commissioner in Sind. In regard to the other districts of the Presidency, it can only be said that while a portion of the discrepancies brought to light by a comparison of the census and registration figures can be accounted for by special local conditions such as the prevalence of plague and famine and the migration of populations consequent on these calamities, a considerable part is no doubt due to an incomplete record of the statistics under reference.

2. The year under report was the most unhealthy in the recent history of the Presidency and the vital statistics of 1900 were affected to an enormous extent by the influences of widespread and very severe famine superadded to those of plague. In the train of famine came cholera, dysentery and diarrhœa,

while the enfeebled condition of the people appears to have rendered them even more than usually susceptible to fever, the mortality from which reached an appalling total. The number of deaths from small-pox, too, though insignificant compared with that of the deaths due to the other causes mentioned, was very large in comparison with the average. Nor are evidences of the unhealthy nature of the year confined to the mortality statistics of the native community alone. Among Europeans and Eurasians also the deaths were considerably more numerous than in the preceding year. The total number of deaths during the year under report was 1,318,783 against 672,269 in the year 1899, showing an increase of over 96·1 per cent. The death-rate per mille rose from 35·72 in the preceding year to 70·07 in 1900, the decennial mean being 31·28. The highest rates are to be found in the Gujarát Districts where the distress was most severe and the population was largely swollen by the tide of immigrants from adjacent Native States. In the plague figures alone is any improvement manifested. The number of deaths from this disease was only 33,196 during the year under report as against 96,596 in the year 1899. These figures are very satisfactory.

3. The abnormally high death-rate of the year was, as is natural during the prevalence of famine conditions, accompanied by an exceptionally low birth-rate. This fell from 36·42 per mille in 1899 to 26·87 in the year under report against a decennial mean of 35·32. The actual number of births recorded during the year was 505,662 against 685,348 in the preceding year. The Gujárát Districts show the greatest falling off in regard to the birth-rate, but all the famine-stricken districts were injuriously affected in this respect and it is in the City of Bombay and the Kánara District alone that the number of births recorded during the year is larger than that of 1899.

4. Comparing the statistics of rural with those of urban areas it would appear that the birth-rate in the former has been more influenced by the famine than that in the latter. The birth-rate in urban areas fell by less than 3 per mille only, while in rural areas the decrease amounts to as much as 10·5 per mille. This state of affairs resulted, no doubt, from the migration of rural populations to the towns in search of work or food. The abnormally low birth-rates recorded in the Cities of Poona, Násik and Belgaum are partly accounted for by the prevalence of plague, but the Governor in Council is unable to accept this explanation as entirely adequate and the Commissioners, C. D. and S. D., should be requested to report whether, in their opinion, any and, if so, what action should be taken to improve the registration of births in those places. The trend of famine-stricken populations towards the towns is responsible, also, for the urban death-rate of the year under report being far in excess of the rural rate. The phenomenon is observable in 18 out of the 23 districts of the Presidency, and the discrepancies in the famine districts are very remarkable. The statistics and causes of famine mortality will be fully examined by Government in the Famine Department.

5. The epidemic of cholera, which visited almost all parts of the Presidency during the year under report, was by far the most severe of any during the past 20 years for which figures are given by the Sanitary Commissioner. The number of deaths registered is 163,889, but there can be no doubt that the record is largely defective, and that the actual mortality from this cause was much higher. Amongst a population such as that of the Gujarát Districts, enfeebled by famine and subjected to exposure, the disease, in a virulent form, spread with phenomenal rapidity and fatal results. With reference to paragraph 48 of the report it may be pointed out that in the northern part of Gujarát, where the cholera epidemic was most severe, there was practically no rain till after the middle of July, so that the months of June and July should be included in the hot and dry rather than in the rainy season. Fever was responsible for 543,319 deaths against 228,438 in the previous year, being an increase of 137·8 per cent. The death-rates from fever are especially high in the famine districts and it is probable that many deaths were recorded as due to

this cause which should have come under "cholera." At the same time, however, it must be noted that a special type of fever appears to have been prevalent in Gujarát during the earlier months of the year which could not be identified with relapsing fever. Dysentery and diarrhœa are the invariable accompaniments of famine and during the year under report as many as 218,243 deaths were recorded as due to these diseases against 74,736 in the year 1899. The number of deaths from small-pox was only 9,885, but this is much in excess of the average mortality from this cause.

6. The steady rise in the number of deaths registered as due to "other causes," which has been apparent during recent years and has already attracted the attention of Government and of the Government of India, is continued during the year under report. In 1889 the number of deaths under this head was 78,044, in 1899 it was 254,872, and in 1900 it was 342,027. The view taken by the Governor in Council as to the true explanation of this phenomenon, which has become a specially prominent feature of the vital statistics of this Presidency since 1896, is contained in the letter addressed to the Government of India, No. 4083, dated the 17th July 1901, and embodied in Government Resolution No. 4358, dated the 31st July 1901. No reasons for modifying that explanation are afforded by the facts and figures furnished in the report under review, although it may be remarked that an increase of deaths from "other causes" is the less difficult to understand when it takes place during a period when very large numbers of deaths were due to such indefinite causes as debility, or old age, and were accelerated by privation and mental distress.

7. The attention of the Commissioner, C. D., should be invited to the remarks of the Sanitary Commissioner (in his paragraph 119) regarding the absence of method in the development of the towns of Bhusával and Manmád. The matter is one to which Government attach the greatest importance and each of the Collectors concerned should be requested to submit a full report on the subject.

8. The passages of the report relating to the famine will be fully examined and commented on by Government in the Famine Department, to which it would have been preferable that they should have been submitted.

9. The report of the Sanitary Board calls for no special remark. Owing to plague and famine local bodies were unable during the year to take up any projects of importance for the improvement of their sanitary arrangements. The report of the Port Health Officer, Bombay, which testifies to the unremitting efforts directed by Major Crimmin, V.C., C.I.E., I.M.S., and his staff to preventing the spread of plague, has been read with interest by the Governor in Council.

10. The detailed instructions of the Government of India in regard to the curtailment of the report now under review have been to some extent complied with by the Sanitary Commissioner, but the report still occupies 21 pages more than are stated by the Government of India to be necessary, and it is apparent that there is room for considerable further curtailment. The special attention of the Sanitary Commissioner should be drawn to the third clause of paragraph 14 of the letter from the Government of India printed in the preamble to Government Resolution No. 2292, dated the 20th April 1901, and he should be requested to consider whether several of the tables included in the report as now prepared might not be omitted without diminishing the value of the report. As instances of such may be noted those in paragraphs 5, 6, 18, 19, 43, 45 (*a*), 49, 51, 52, 53, 54, 55, 64, 76 and 100. The remarks on the rainfall of the year (paragraph 74) to which a whole page has been devoted are unnecessarily detailed. The history of the progress of plague in the several districts affected (paragraphs 76—96) may be omitted from future reports, as the information is submitted direct by the Collectors in their annual plague reports. Paragraph 112 contains only a list of suggestions of works required by the Military Department. Such a list should not be inserted in future reports.

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11. The report of the Port Health Officer, Bombay, contains several tables which should have been given as appendices to the report and not inserted in the narrative. Two of the Rules made by Government for the inspection of vessels are unnecessarily quoted in full in paragraph 9, and paragraphs 28, 32, 40, 45 and 46 contain details which are superfluous in an annual report.

12. The administration of the Sanitary Department throughout the year was efficient, and Lieut.-Colonel Clarkson has submitted a full report. Famine and cholera imposed heavy duties on all the officers of the Department and these duties were performed with zeal.

H. O. QUIN,
Secretary to Government.

To

The Surgeon General with the Government of Bombay,
The Sanitary Commissioner for the Government of Bombay,
The Health Officer of the Port of Bombay,
The Sanitary Engineer and Member of the Sanitary Board,
The Commissioner in Sind,
The Commissioner, N. D.,
The Commissioner, C. D.,
The Commissioner, S. D.,
All Collectors and District Magistrates in the Presidency Proper and Sind,
The Municipal Commissioner for the City of Bombay,
The Director of Land Records and Agriculture,
The Deputy Adjutant General, Bombay Command,
The Compiler, General Administration Report for 1900-1901,
The Chairman, Bombay Port Trust,
The Revenue Department of the Secretariat,
The Famine Department of the Secretariat,
The Marine Department of the Secretariat,
The General Department of the Secretariat (Plague),
} With copies of the Report.

A. M. T. Jackson, Esq., M.A. (Oxon.), Bar-at-Law, I.C.S.,
(With reference to Government Resolution No. 4796, dated the 20th August 1901.)

The Government of India,
The Secretary of State for India,
} *By letter.*

The Editors' Table, *Bombay*,
The Editors' Table, *Poona*,
The Editors' Table, *Dhárwár*,
The Editors' Table, *Belgaum*,
The Editors' Table, Karáchi.